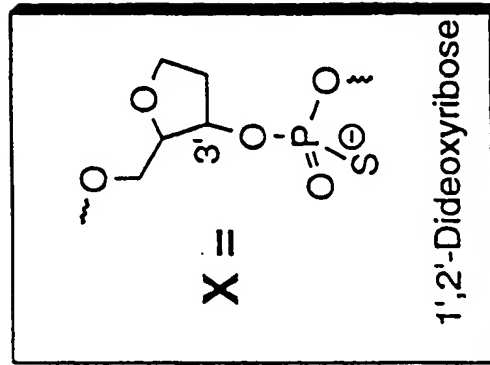


OLIGODEOXYNUCLEOTIDE PHOSPHOROTHIOATES AND SITE OF MODIFICATION

Oligo No. Sequence & Modification

<u>SEQ ID NO.: 8</u>	<u>8</u>	5'-CCTACTAGCGTTCTCATC-3' (133-1)
<u>SEQ ID NO.: 9</u>	<u>9</u>	5'-CCTACTAGCXTTCTCATC-3' (139-2)
<u>SEQ ID NO.: 10</u>	<u>10</u>	5'-CCTACTAXCGTTCTCATC-3' (133-2)
<u>SEQ ID NO.: 11</u>	<u>11</u>	5'-CCTACTXGCGTTCTCATC-3' (139-3)
<u>SEQ ID NO.: 12</u>	<u>12</u>	5'-CCTACXAGCGTTCTCATC-3' (133-3)
<u>SEQ ID NO.: 13</u>	<u>13</u>	5'-CCTAXTAGCGTTCTCATC-3' (139-4)
<u>SEQ ID NO.: 14</u>	<u>14</u>	5'-CCTXCTAGCGTTCTCATC-3' (133-4)
<u>SEQ ID NO.: 15</u>	<u>15</u>	5'-CCTXCTAGCCTTCTCATC-3' (145-10a)
<u>SEQ ID NO.: 16</u>	<u>16</u>	5'-CCTACTAGCGXTCTCATC-3' (133-5)
<u>SEQ ID NO.: 17</u>	<u>17</u>	5'-CCTACTAGCGTXCTCATC-3' (139-7)
<u>SEQ ID NO.: 18</u>	<u>18</u>	5'-CCTACTAGCGTTXTCATC-3' (133-6)
<u>SEQ ID NO.: 19</u>	<u>19</u>	5'-CCTACTAGCGTTCXCATC-3' (139-8)
<u>SEQ ID NO.: 20</u>	<u>20</u>	5'-CCTXXTAGCGTTCTCATC-3' (133-12)
<u>SEQ ID NO.: 21</u>	<u>21</u>	5'-XXTAGCGTTCTCATC-3' (139-6)
<u>SEQ ID NO.: 22</u>	<u>22</u>	5'-CCTACTAGCGTTCXXATC-3' (139-9)
<u>SEQ ID NO.: 23</u>	<u>23</u>	5'-CCTXCTXGCGTTCTCATC-3' (145-10b)

FIG. 1A



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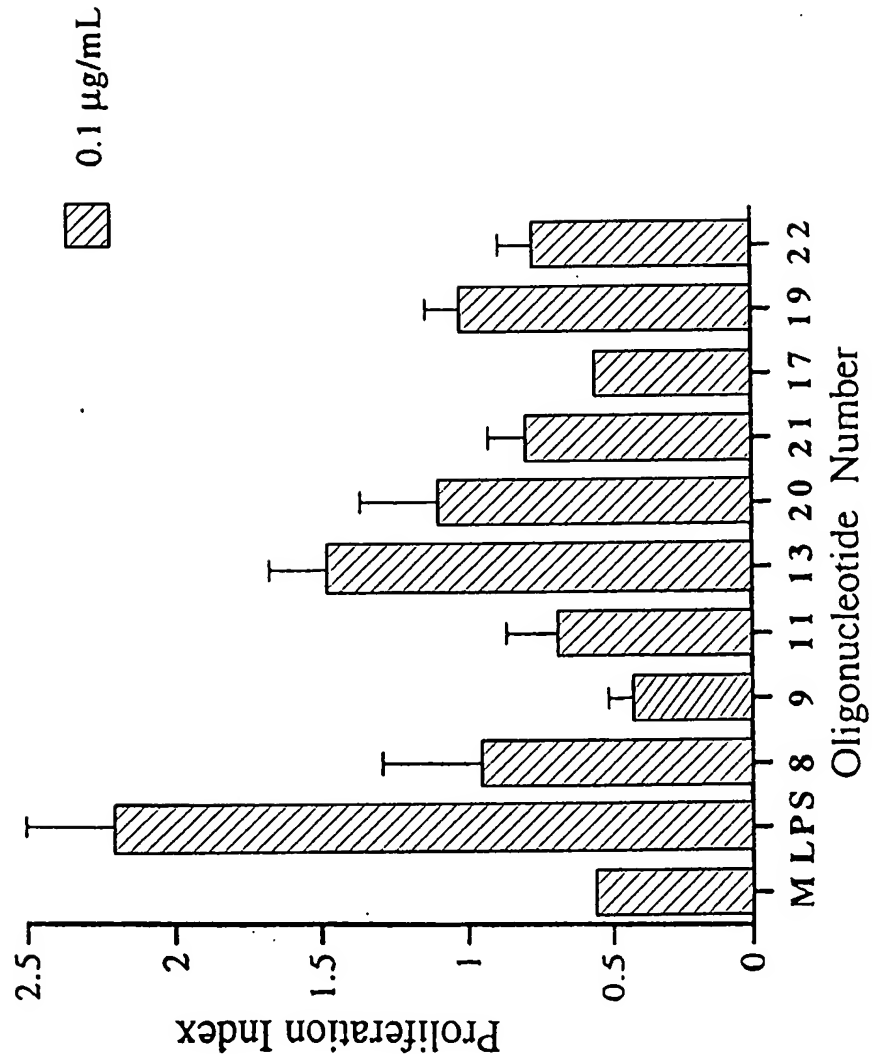


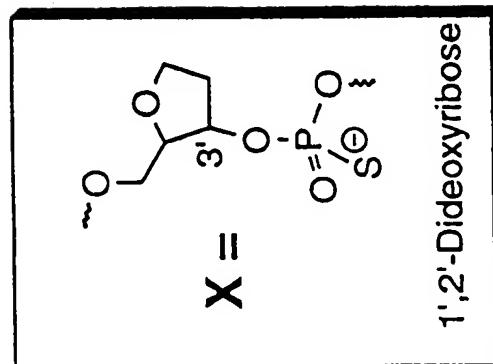
FIG. 1B

OLIGODEOXYNUCLEOTIDE PHOSPHOROTHIOATES AND SITE OF MODIFICATION

Oligo No. *Sequence & Modification*

<u>SEQ ID NO.: 8</u>	8	5'-CCTACTAGCGTTCTCATC-3' (133-1)
<u>SEQ ID NO.: 9</u>	9	5'-CCTACTAGCXTTCTCATC-3' (139-2)
<u>SEQ ID NO.: 10</u>	10	5'-CCTACTAXCGTTCTCATC-3' (133-2)
<u>SEQ ID NO.: 11</u>	11	5'-CCTACTXGCGTTCTCATC-3' (139-3)
<u>SEQ ID NO.: 12</u>	12	5'-CCTACXAGCGTTCTCATC-3' (133-3)
<u>SEQ ID NO.: 13</u>	13	5'-CCTAXTAGCGTTCTCATC-3' (139-4)
<u>SEQ ID NO.: 14</u>	14	5'-CCTXCTAGCGTTCTCATC-3' (133-4)
<u>SEQ ID NO.: 15</u>	15	5'-CCTXCTAGCCTTCTCATC-3' (145-10a)
<u>SEQ ID NO.: 16</u>	16	5'-CCTACTAGCGXTCTCATC-3' (133-5)
<u>SEQ ID NO.: 17</u>	17	5'-CCTACTAGCGTXCTCATC-3' (139-7)
<u>SEQ ID NO.: 18</u>	18	5'-CCTACTAGCGTTXTCATC-3' (133-6)
<u>SEQ ID NO.: 19</u>	19	5'-CCTACTAGCGTTCXCATC-3' (139-8)
<u>SEQ ID NO.: 20</u>	20	5'-CCTXXTAGCGTTCTCATC-3' (133-12)
<u>SEQ ID NO.: 21</u>	21	5'-XXTAGCGTTCTCATC-3' (139-6)
<u>SEQ ID NO.: 22</u>	22	5'-CCTACTAGCGTTCXXATC-3' (139-9)
<u>SEQ ID NO.: 23</u>	23	5'-CCTXCTXGCGTTCTCATC-3' (145-10b)

FIG. 2A



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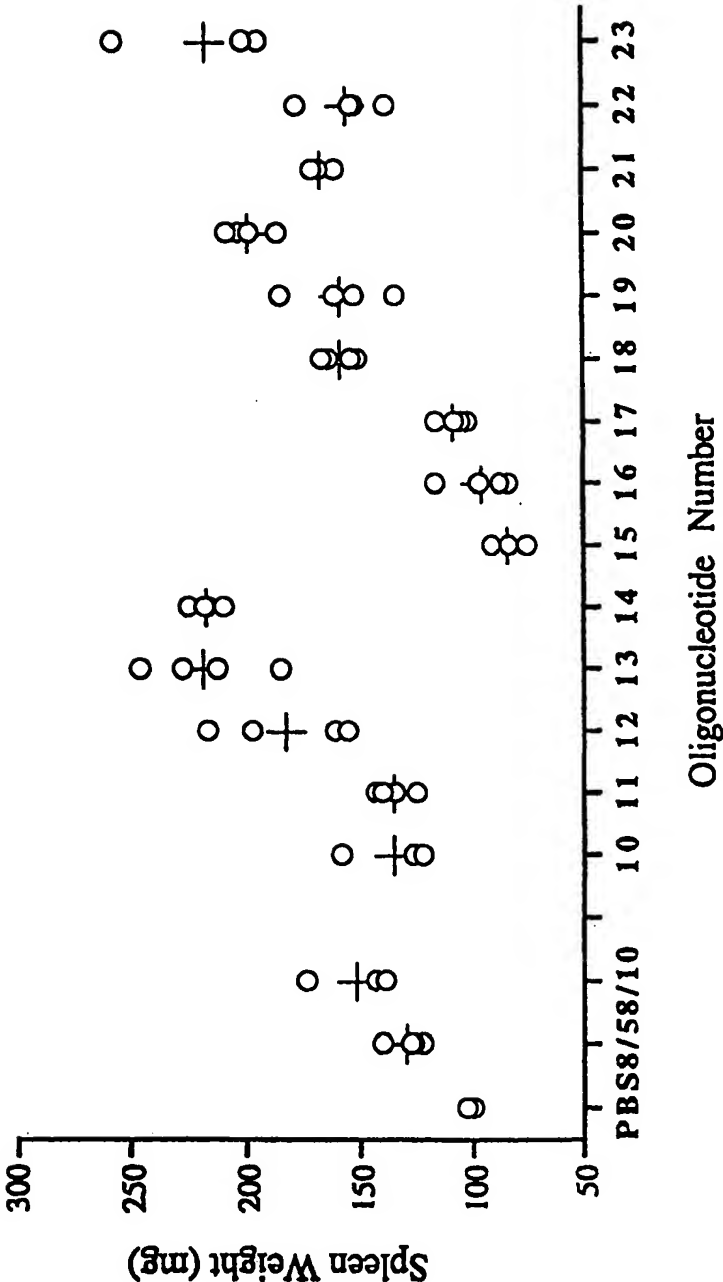


FIG. 2B

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OLIGODEOXYNUCLEOTIDE PHOSPHOROTHIOATES AND SITE OF MODIFICATION

Oligo No. *Sequence & Modification*

<u>SEQ ID NO.: 1</u>	1	5'-CTATCTGACGTTCTCTGT-3' (131-1)
<u>SEQ ID NO.: 105</u>	2	5'-CTATCTGAXGTTCTCTGT-3' (131-13)
<u>SEQ ID NO.: 106</u>	3	5'-CTATCTGXCGTTCTCTGT-3' (131-2)
<u>SEQ ID NO.: 107</u>	4	5'-CTATCXGACGTTCTCTGT-3' (131-3)
<u>SEQ ID NO.: 108</u>	5	5'-CTAXCTGACGTTCTCTGT-3' (131-4)
<u>SEQ ID NO.: 109</u>	6	5'-CTATCTGACGXTCTCTGT-3' (131-5)
<u>SEQ ID NO.: 110</u>	7	5'-CTATCTGACGTTXTCTGT-3' (131-6)

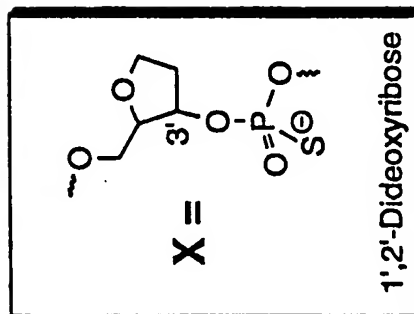


FIG. 3A

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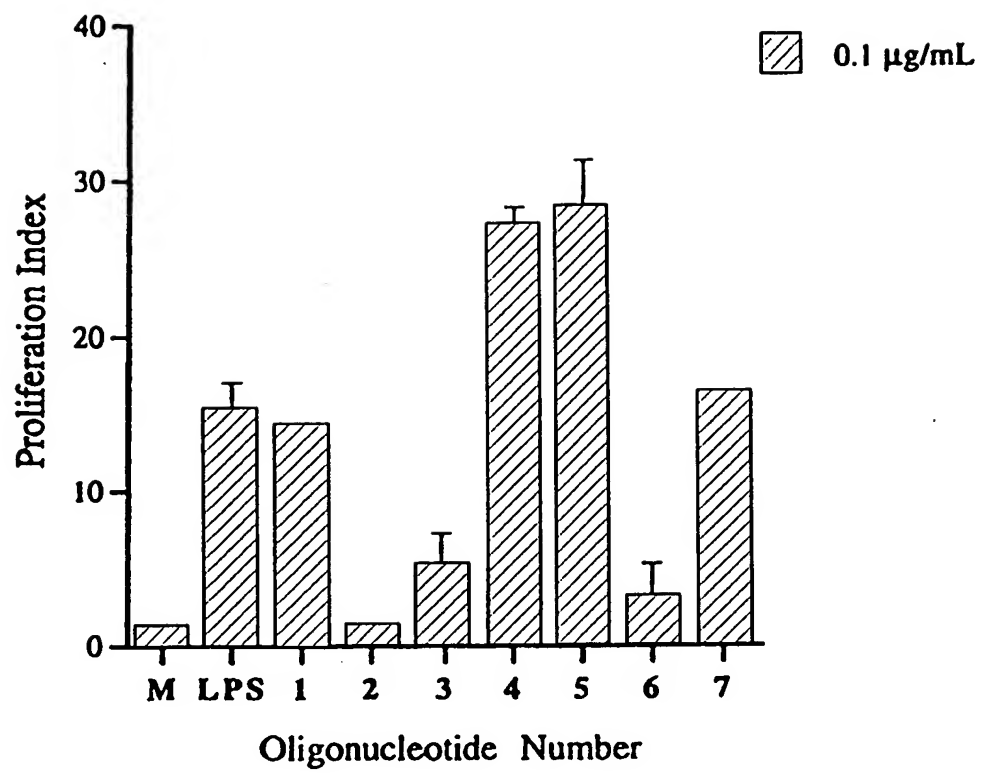


FIG. 3B

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OLIGODEOXYNUCLEOTIDE PHOSPHOROTHIOATES AND SITE OF MODIFICATION

Oligo No. Sequence & Modification

<u>SEQ ID NO.: 1</u>	1	5'-CTATCTGACGTTCTCTGT-3' (131-1)
<u>SEQ ID NO.: 105</u>	2	5'-CTATCTGAXGTTCTCTGT-3' (131-13)
<u>SEQ ID NO.: 106</u>	3	5'-CTATCTGXC GTTCTCTGT-3' (131-2)
<u>SEQ ID NO.: 107</u>	4	5'-CTATCXGACGTTCTCTGT-3' (131-3)
<u>SEQ ID NO.: 108</u>	5	5'-CTAXCTGACGTTCTCTGT-3' (131-4)
<u>SEQ ID NO.: 109</u>	6	5'-CTATCTGACGXTCTCTGT-3' (131-5)
<u>SEQ ID NO.: 110</u>	7	5'-CTATCTGACGTTXTCTGT-3' (131-6)

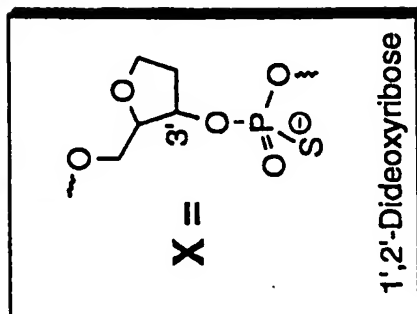


FIG. 4A

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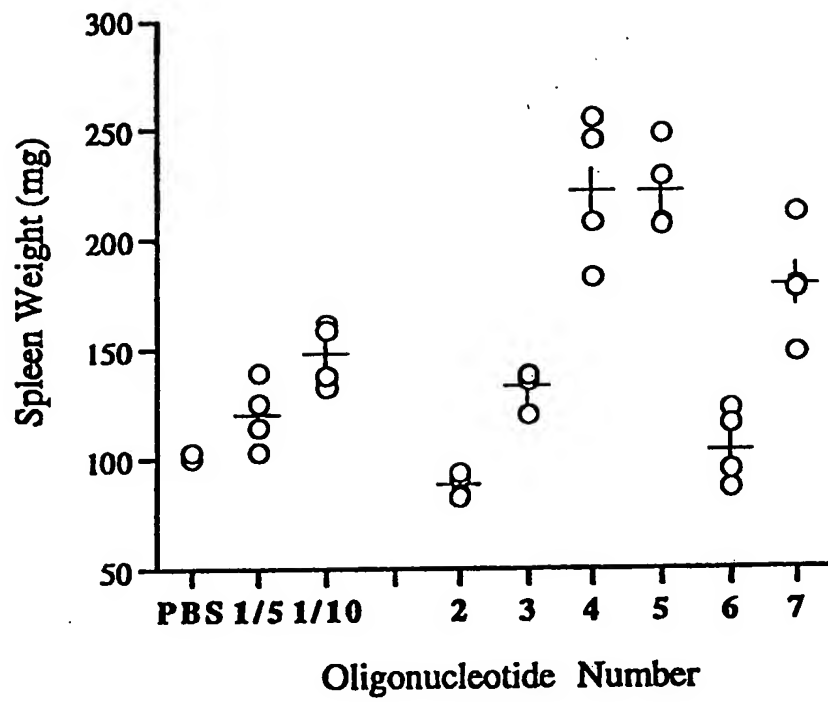


FIG. 4B

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OLIGODEOXYNUCLEOTIDE PHOSPHOROTHIOATES AND MODIFICATION OF LINKAGES

Sequence & Modification

<u>SEQ ID NO.: 8</u>	133-1	5'-CCTACTAGCGTTCTCATC-3'
<u>SEQ ID NO.: 24</u>	141-2	5'-CCTACTAGCXTTCTCATC-3'
<u>SEQ ID NO.: 25</u>	141-3	5'-CCTACTXGCGTTCTCATC-3'
<u>SEQ ID NO.: 26</u>	141-4	5'-CCTAXTAGCGTTCTCATC-3'
<u>SEQ ID NO.: 27</u>	141-5	5'-CCTXXTAGCGTTCTCATC-3'
<u>SEQ ID NO.: 28</u>	141-6	5'-XXTAGTAGCGTTCTCATC-3'
<u>SEQ ID NO.: 29</u>	141-7	5'-CCTACTAGCGTXCTCATC-3'
<u>SEQ ID NO.: 30</u>	141-8	5'-CCTACTAGCGTTCXCATC-3'
<u>SEQ ID NO.: 31</u>	141-9	5'-CCTACTAGCGTTCXXATC-3'
<u>SEQ ID NO.: 1</u>	131-1	5'-CTATCTGACGTTCTCTGT-3'
<u>SEQ ID NO.: 32</u>	137-2	5'-CTATCTGXCGTTCTCTGT-3'
<u>SEQ ID NO.: 33</u>	137-3	5'-CTATCXGACGTTCTCTGT-3'
<u>SEQ ID NO.: 34</u>	137-4	5'-CTAXCTGACGTTCTCTGT-3'

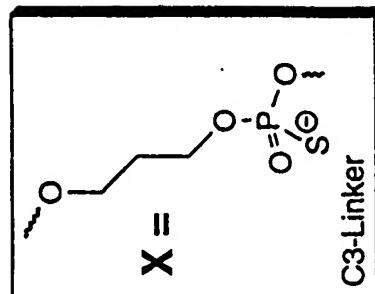


FIG. 5A

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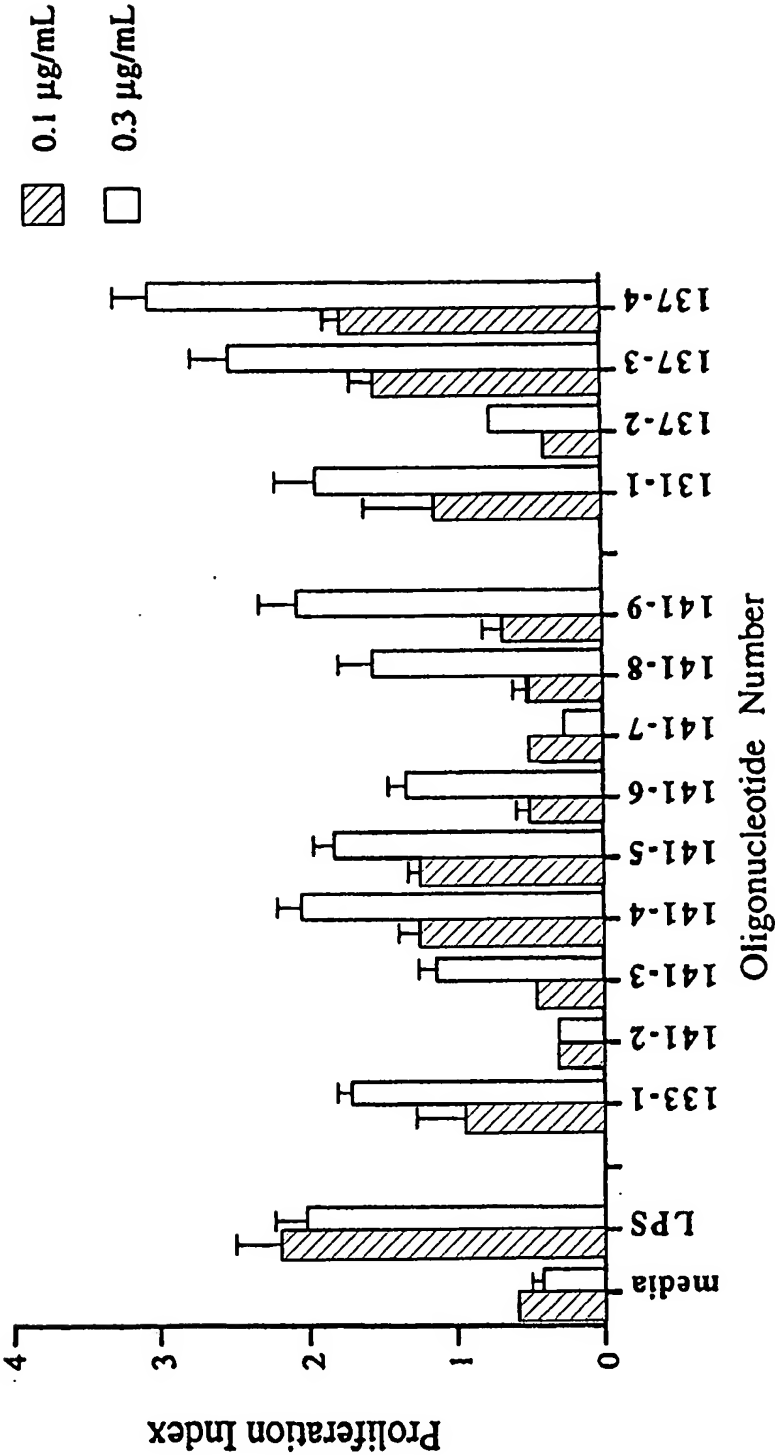


FIG. 5B

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OLIGODEOXYNUCLEOTIDE PHOSPHOROTHIOATES AND MODIFICATION OF LINKAGES

Seq ID No. *Sequence & Modification*

SEQ ID NO.: 8	133-1	5'-CCTACTAGCGTTCTCATC-3'
SEQ ID NO.: 24	141-2	5'-CCTACTAGCXTTCTCATC-3'
SEQ ID NO.: 25	141-3	5'-CCTACTXGCGTTCTCATC-3'
SEQ ID NO.: 26	141-4	5'-CCTAXTAGCGTTCTCATC-3'
SEQ ID NO.: 27	141-5	5'-CCTXXTAGCGTTCTCATC-3'
SEQ ID NO.: 28	141-6	5'-XXTAGCGTTCTCATC-3'
SEQ ID NO.: 29	141-7	5'-CCTACTAGCGTXCTCATC-3'
SEQ ID NO.: 30	141-8	5'-CCTACTAGCGTTCXCATC-3'
SEQ ID NO.: 31	141-9	5'-CCTACTAGCGTTCXXATC-3'
SEQ ID NO.: 1	131-1	5'-CTATCTGACGTTCTCTGT-3'
SEQ ID NO.: 32	137-2	5'-CTATCTGXCGTTCTCTGT-3'
SEQ ID NO.: 33	137-3	5'-CTATCXGACGTTCTCTGT-3'
SEQ ID NO.: 34	137-4	5'-CTAXCTGACGTTCTCTGT-3'

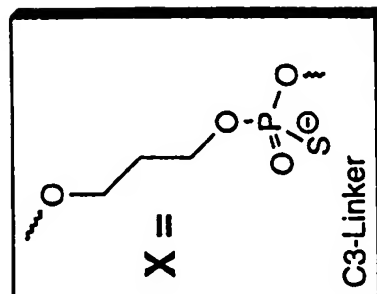


FIG. 6A

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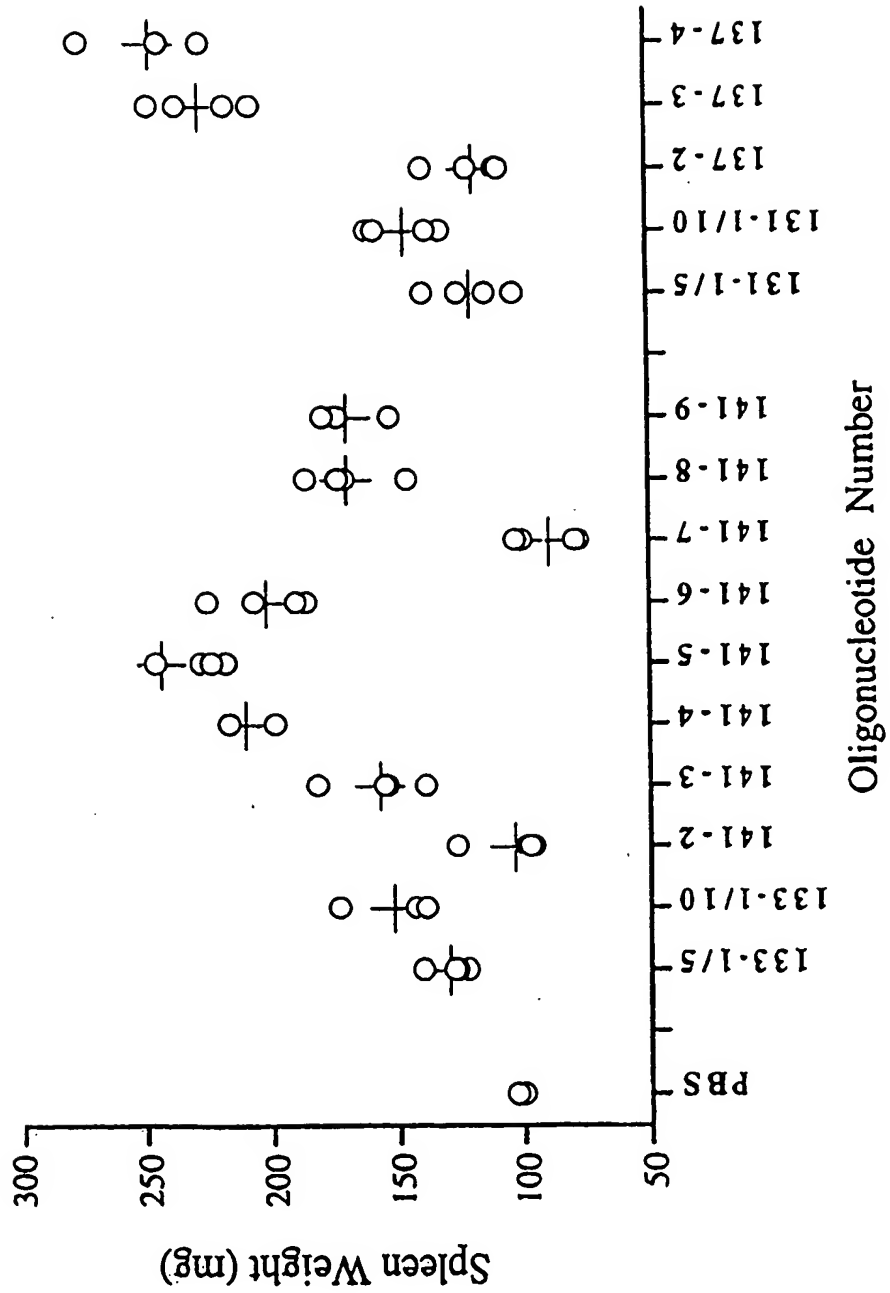


FIG. 6B

OLIGODEOXYNUCLEOTIDE PHOSPHOROTHIOATES AND SITE OF MODIFICATION

<i>Oligo No.</i>	<i>Sequence & Modification</i>
<u>SEQ ID NO.: 1</u>	1 5'-CTATCTGACGTTCTCTGT-3' (131-1)
<u>SEQ ID NO.: 35</u>	2 5'-CTAXCTGACGTTCTCTGT-3' (153-1)
<u>SEQ ID NO.: 36</u>	3 5'-CTATCTGACGTTCCXCTGT-3' (153-2)
<u>SEQ ID NO.: 37</u>	4 5'-CTAYCTGACGTTCTCTGT-3' (153-3)
<u>SEQ ID NO.: 38</u>	5 5'-CTATCTGACGTTTCYCTGT-3' (153-4)
<u>SEQ ID NO.: 8</u>	6 5'-CCTACTAGCGTTCTCATC-3' (133-1)
<u>SEQ ID NO.: 39</u>	7 5'-CCTXCTAGCGTTCTCATC-3' (155-1)
<u>SEQ ID NO.: 40</u>	8 5'-CCTACTAGCGTTCCXCATC-3' (155-2)
<u>SEQ ID NO.: 41</u>	9 5'-CCTYCTAGCGTTCTCATC-3' (155-3)
<u>SEQ ID NO.: 42</u>	10 5'-CCTACTAGCGTTTCYCATC-3' (155-4)

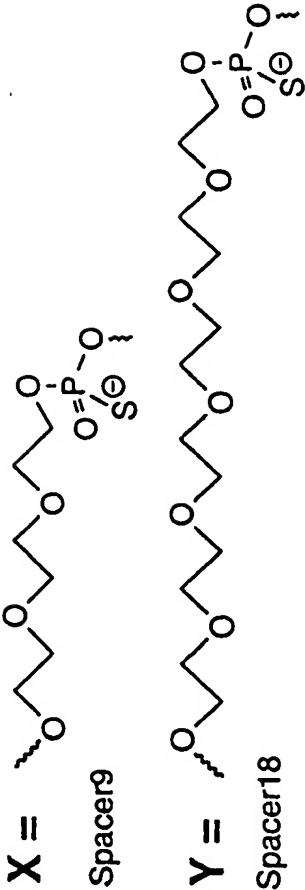


FIG. 7A

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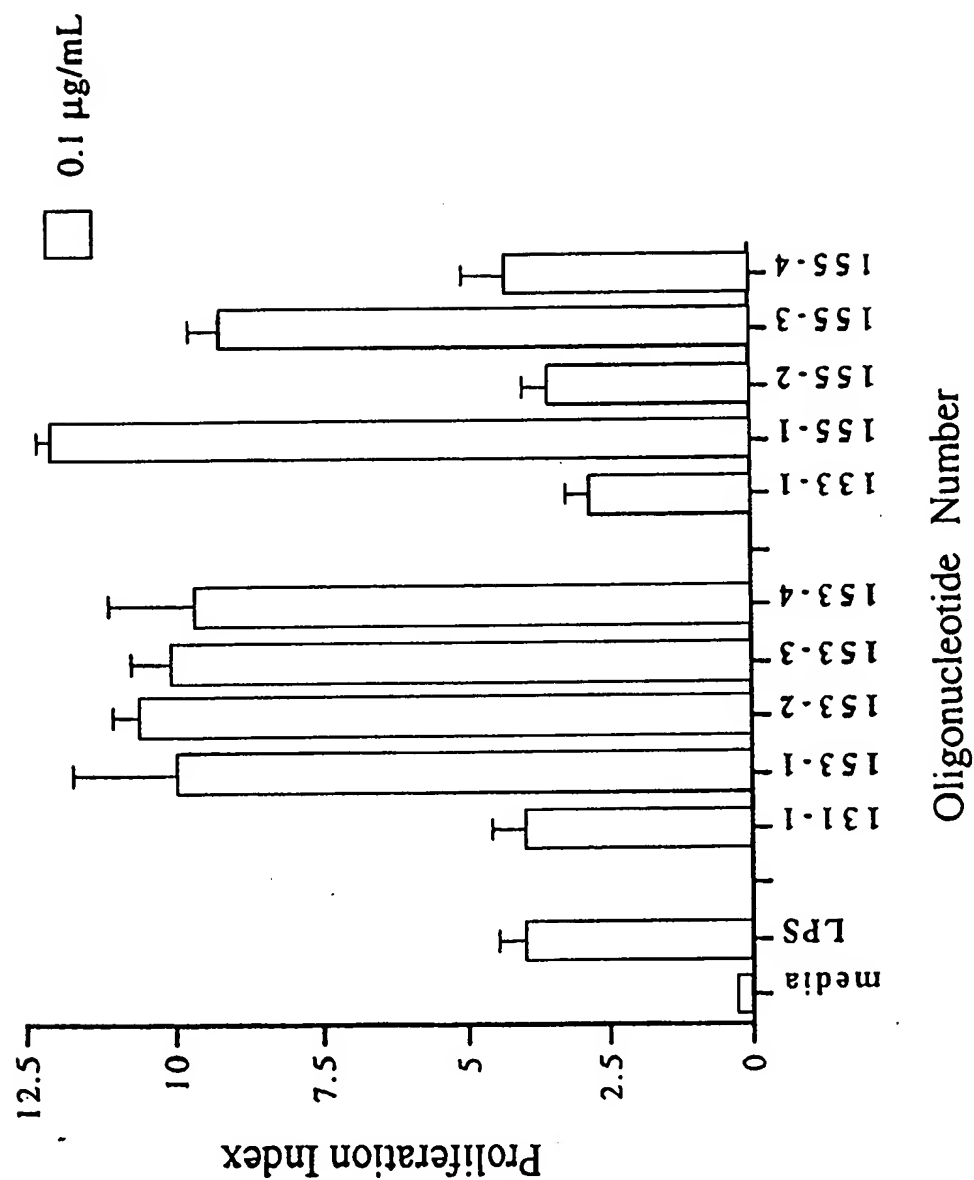


FIG. 7B

OLIGODEOXYNUCLEOTIDE PHOSPHOROTHIOATES AND SITE OF MODIFICATION

<i>Oligo No.</i>		<i>Sequence & Modification</i>
<u>SEQ ID NO.: 1</u>	1	5'-CTATCTGACGTTCTCTGT-3' (131-1)
<u>SEQ ID NO.: 35</u>	2	5'-CTAXCTGACGTTCTCTGT-3' (153-1)
<u>SEQ ID NO.: 36</u>	3	5'-CTATCTGACGTTCTCTGT-3' (153-2)
<u>SEQ ID NO.: 37</u>	4	5'-CTAYCTGACGTTCTCTGT-3' (153-3)
<u>SEQ ID NO.: 38</u>	5	5'-CTATCTGACGTTCTCTGT-3' (153-4)
<u>SEQ ID NO.: 8</u>	6	5'-CCTACTAGCGTTCTCATC-3' (133-1)
<u>SEQ ID NO.: 39</u>	7	5'-CCTXCTAGCGTTCTCATC-3' (155-1)
<u>SEQ ID NO.: 40</u>	8	5'-CCTACTAGCGTTCTCATC-3' (155-2)
<u>SEQ ID NO.: 41</u>	9	5'-CCTYCTAGCGTTCTCATC-3' (155-3)
<u>SEQ ID NO.: 42</u>	10	5'-CCTACTAGCGTTCTCATC-3' (155-4)

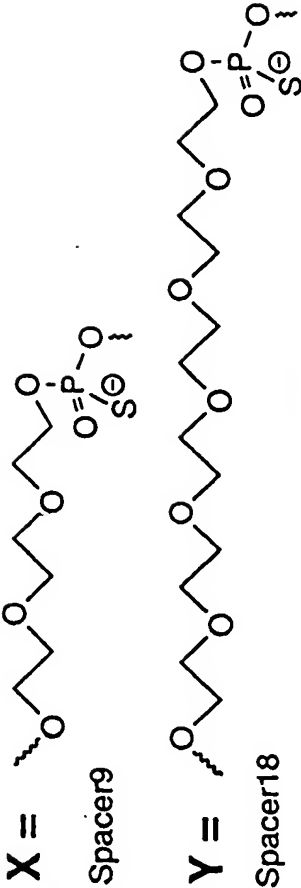


FIG. 8A

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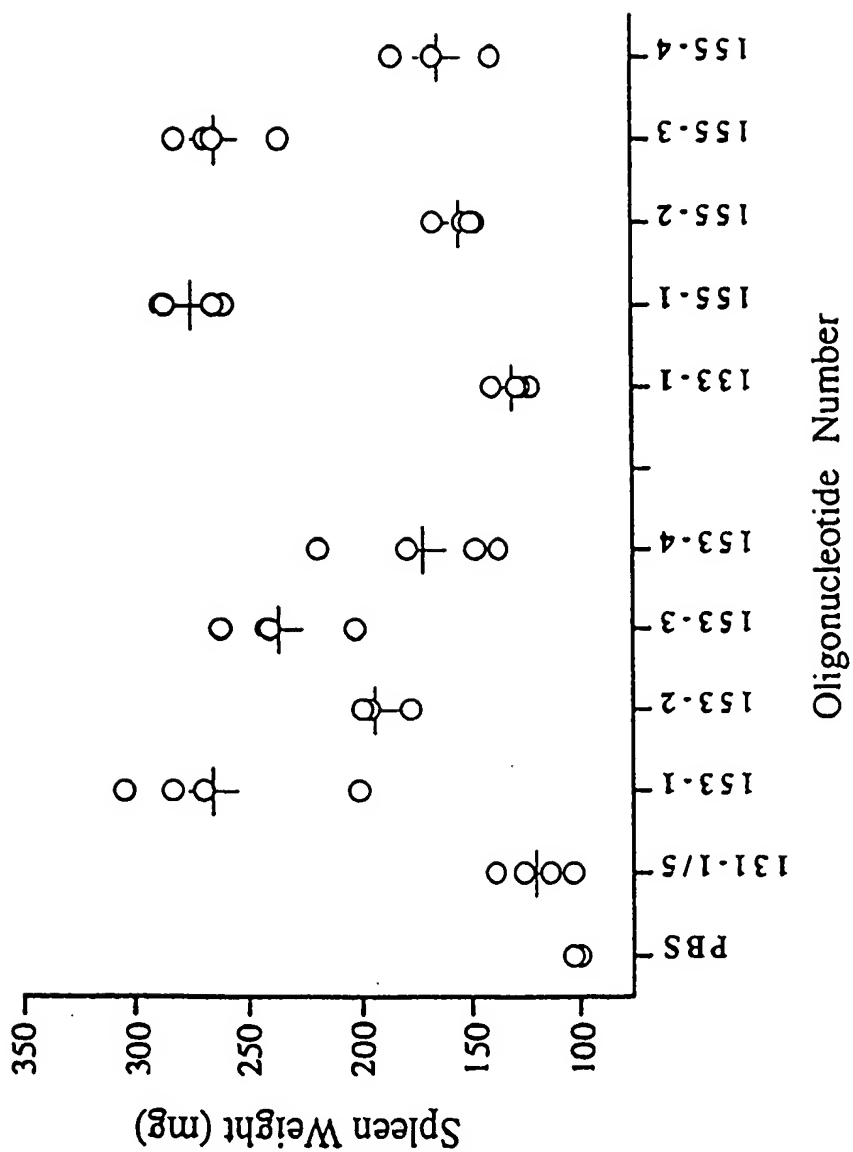


FIG. 8B

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OLIGODEOXYNUCLEOTIDE PHOSPHOROTHIOATES AND SITE OF MODIFICATION

<i>Seq ID No.</i>	<i>Sequence & Modification</i>
<u>SEQ ID NO.: 1</u>	5'-CTATCTGACGTTCTCTGT-3' (131-1)
<u>SEQ ID NO.: 43</u>	5'-CTATCTGXC GTTCTCTGT-3' (157-1)
<u>SEQ ID NO.: 44</u>	5'-CTATCTXAC GTTCTCTGT-3' (157-2)
<u>SEQ ID NO.: 45</u>	5'-CTAXCTGAC GTTCTCTGT-3' (157-3)
<u>SEQ ID NO.: 46</u>	5'-CTATCTGACGTXCTCTGT-3' (157-4)
<u>SEQ ID NO.: 47</u>	5'-CTATCTGACGTTCXCTGT-3' (157-5)

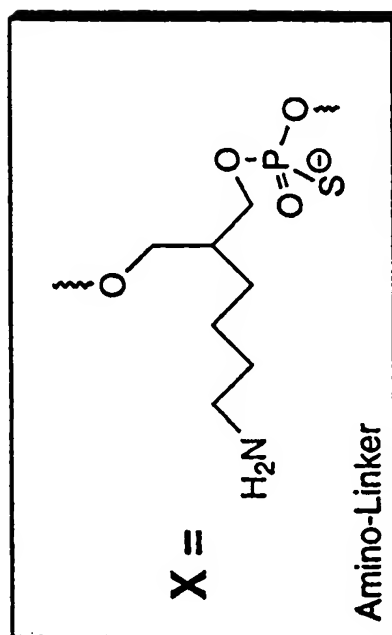


FIG. 9A

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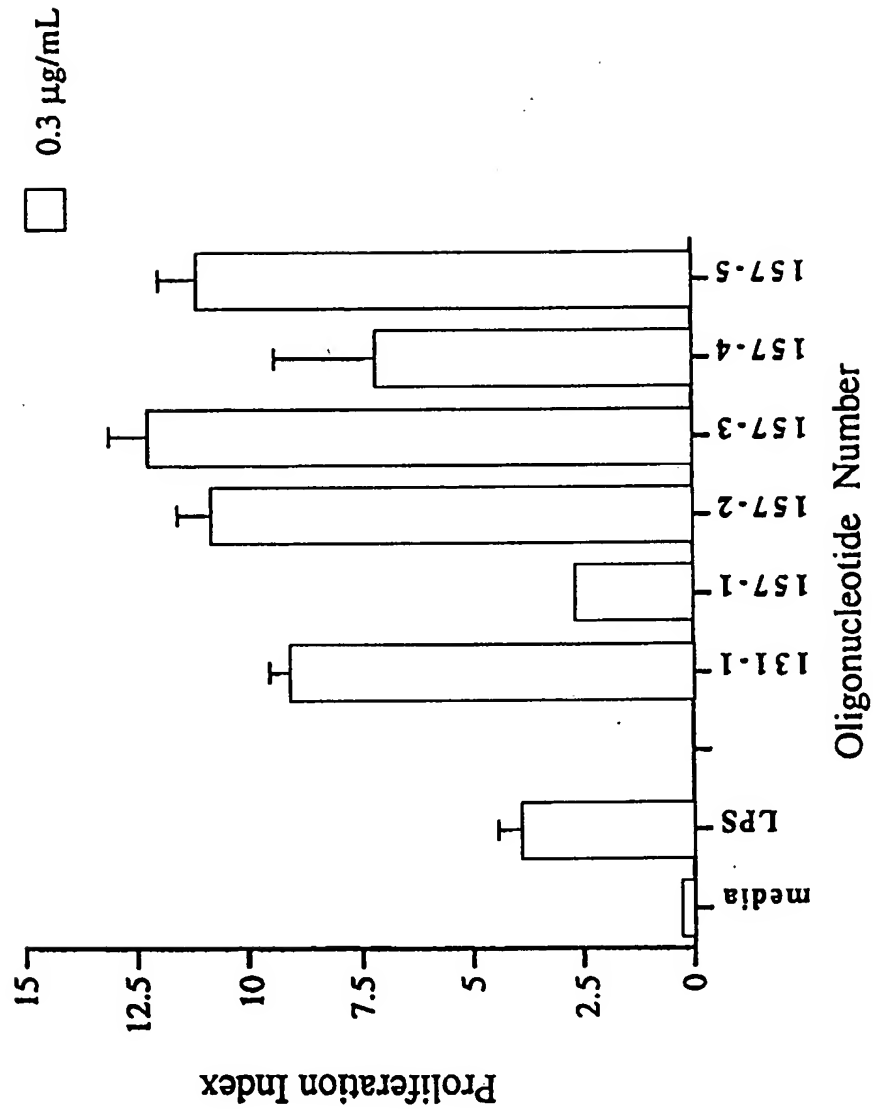


FIG. 9B

OLIGODEOXYNUCLEOTIDE PHOSPHOROTHIOATES AND SITE OF MODIFICATION

Seq ID No.	Sequence & Modification
<u>1</u>	5'-CTATCTGACGTTCTCTGT-3' (131-1)
<u>2</u>	5'-CTATCTGXCGTTCTCTGT-3' (157-1)
<u>3</u>	5'-CTATCTXACGTTCTCTGT-3' (157-2)
<u>4</u>	5'-CTAXCTGACGTTCTCTGT-3' (157-3)
<u>5</u>	5'-CTATCTGACGTXCTCTGT-3' (157-4)
<u>6</u>	5'-CTATCTGACGTTCTXCTGT-3' (157-5)

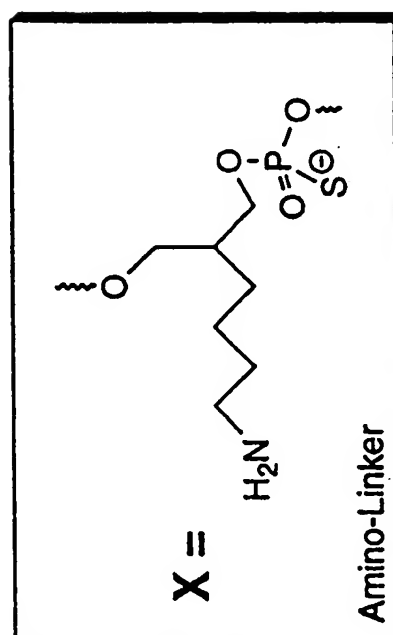


FIG. 10A

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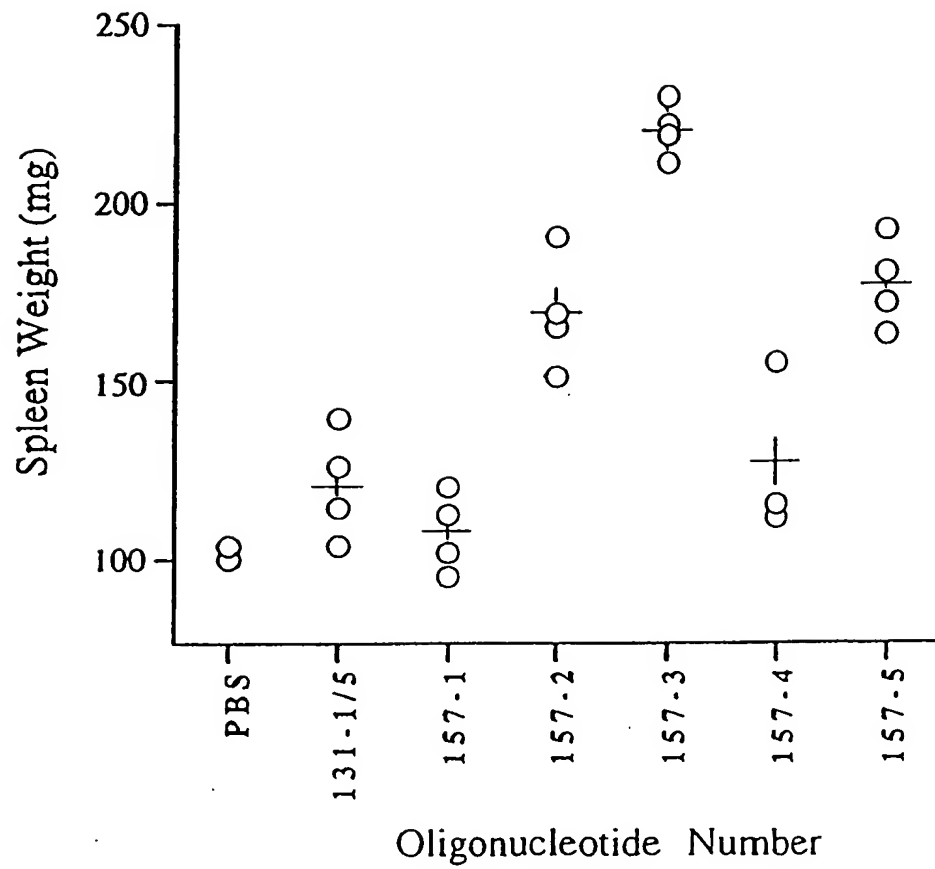


FIG. 10B

OLIGODEOXYNUCLEOTIDE PHOSPHOROTHIOATES AND MODIFICATION OF LINKAGES

Oligo No. Sequence & Modification

<u>SEQ ID NO.: 1</u> 131-1	5'-CTATCTGACGTTCTCTGT-3'
<u>SEQ ID NO.: 48</u> 159-1	5'-CTATCTGACXTTCTCTGT-3'
<u>SEQ ID NO.: 49</u> 159-2	5'-CTATCTGAXGTTCTCTGT-3'
<u>SEQ ID NO.: 50</u> 159-3	5'-CTATXTGACGTTCTCTGT-3'
<u>SEQ ID NO.: 51</u> 159-4	5'-CTATCTGACGTTCTXTGT-3'
<u>SEQ ID NO.: 8</u> 133-1	5'-CCTACTAGCGTTCTCATC-3'
<u>SEQ ID NO.: 52</u> 161-1	5'-CCTACTAGCXTTCTCATC-3'
<u>SEQ ID NO.: 53</u> 161-2	5'-CCTACTAGXGTTCTCATC-3'
<u>SEQ ID NO.: 54</u> 161-3	5'-CCTACTAXCGTTCTCATC-3'
<u>SEQ ID NO.: 55</u> 161-4	5'-CCTAXTAGCGTTCTCATC-3'
<u>SEQ ID NO.: 56</u> 161-5	5'-CCTACTAGCGTTCTXATC-3'

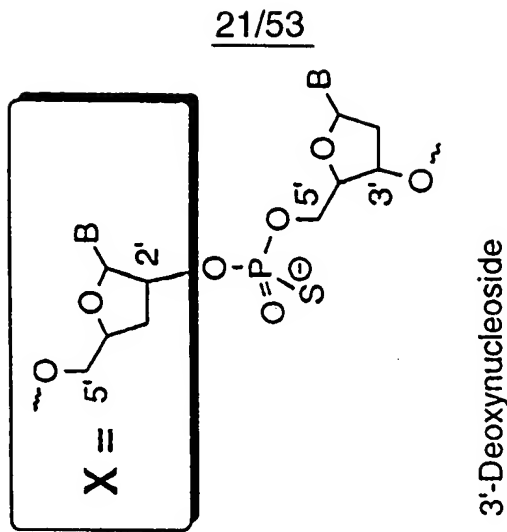


FIG. 11A

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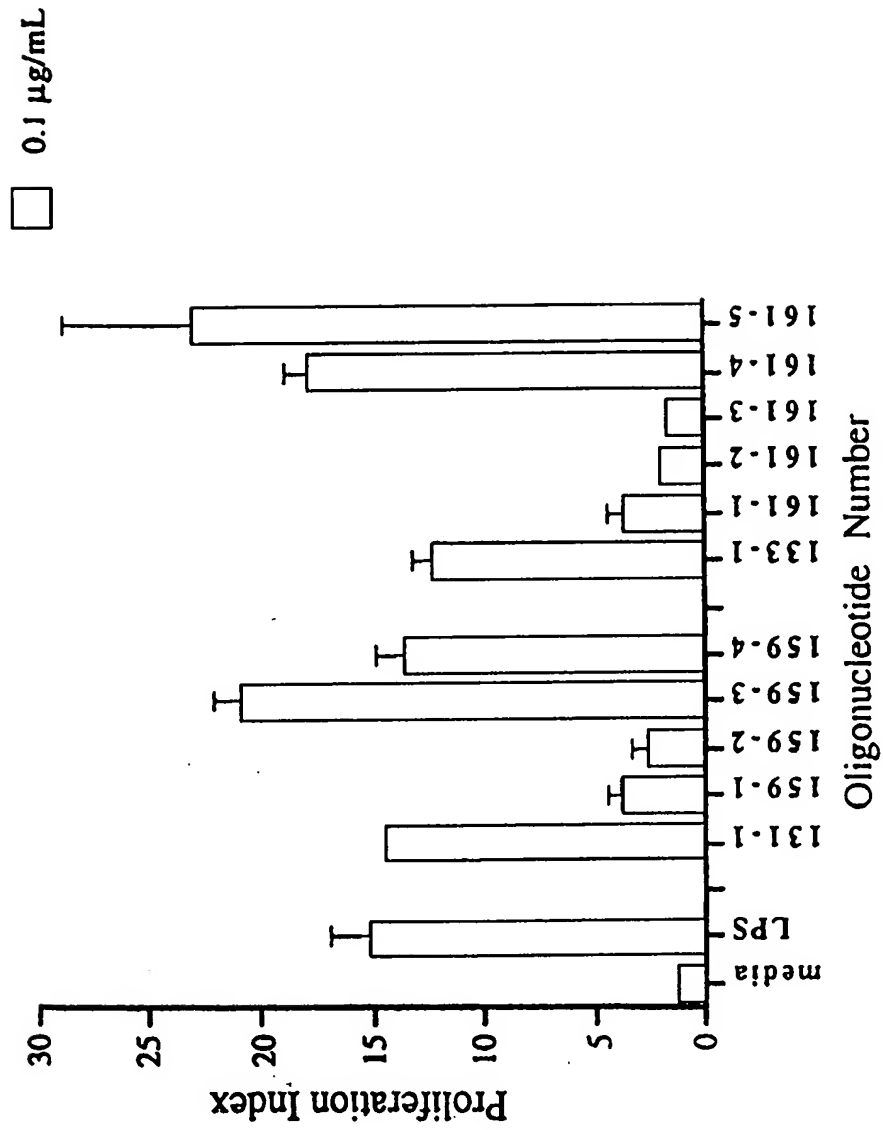


FIG. 11B

OLIGODEOXYNUCLEOTIDE PHOSPHOROTHIOATES AND MODIFICATION OF LINKAGES

Oligo No. Sequence & Modification

<u>SEQ ID NO.: 1</u>	<u>131-1</u>	5'-CTATCTGACGTTCTCTGT-3'
<u>SEQ ID NO.: 48</u>	<u>159-1</u>	5'-CTATCTGACXTTCTCTGT-3'
<u>SEQ ID NO.: 49</u>	<u>159-2</u>	5'-CTATCTGAXGTTCTCTGT-3'
<u>SEQ ID NO.: 50</u>	<u>159-3</u>	5'-CTATXTGACGTTCTCTGT-3'
<u>SEQ ID NO.: 51</u>	<u>159-4</u>	5'-CTATCTGACGTTCTXTGT-3'
<u>SEQ ID NO.: 8</u>	<u>133-1</u>	5'-CCTACTAGCGTTCTCATC-3'
<u>SEQ ID NO.: 52</u>	<u>161-1</u>	5'-CCTACTAGCXTTCTCATC-3'
<u>SEQ ID NO.: 53</u>	<u>161-2</u>	5'-CCTACTAGXGTTCTCATC-3'
<u>SEQ ID NO.: 54</u>	<u>161-3</u>	5'-CCTACTAXCGTTCTCATC-3'
<u>SEQ ID NO.: 55</u>	<u>161-4</u>	5'-CCTAXTAGCGTTCTCATC-3'
<u>SEQ ID NO.: 56</u>	<u>161-5</u>	5'-CCTACTAGCGTTCTXATC-3'

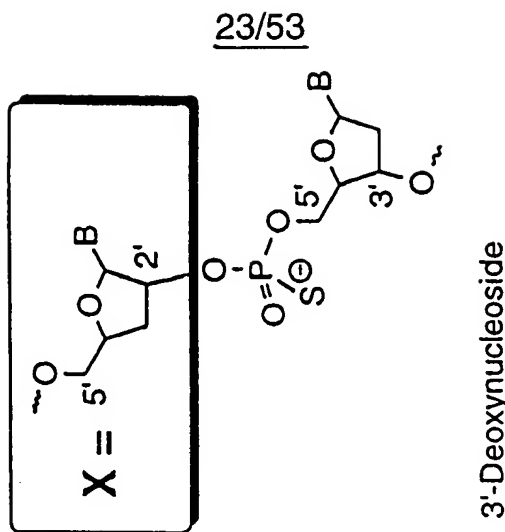


FIG. 12A

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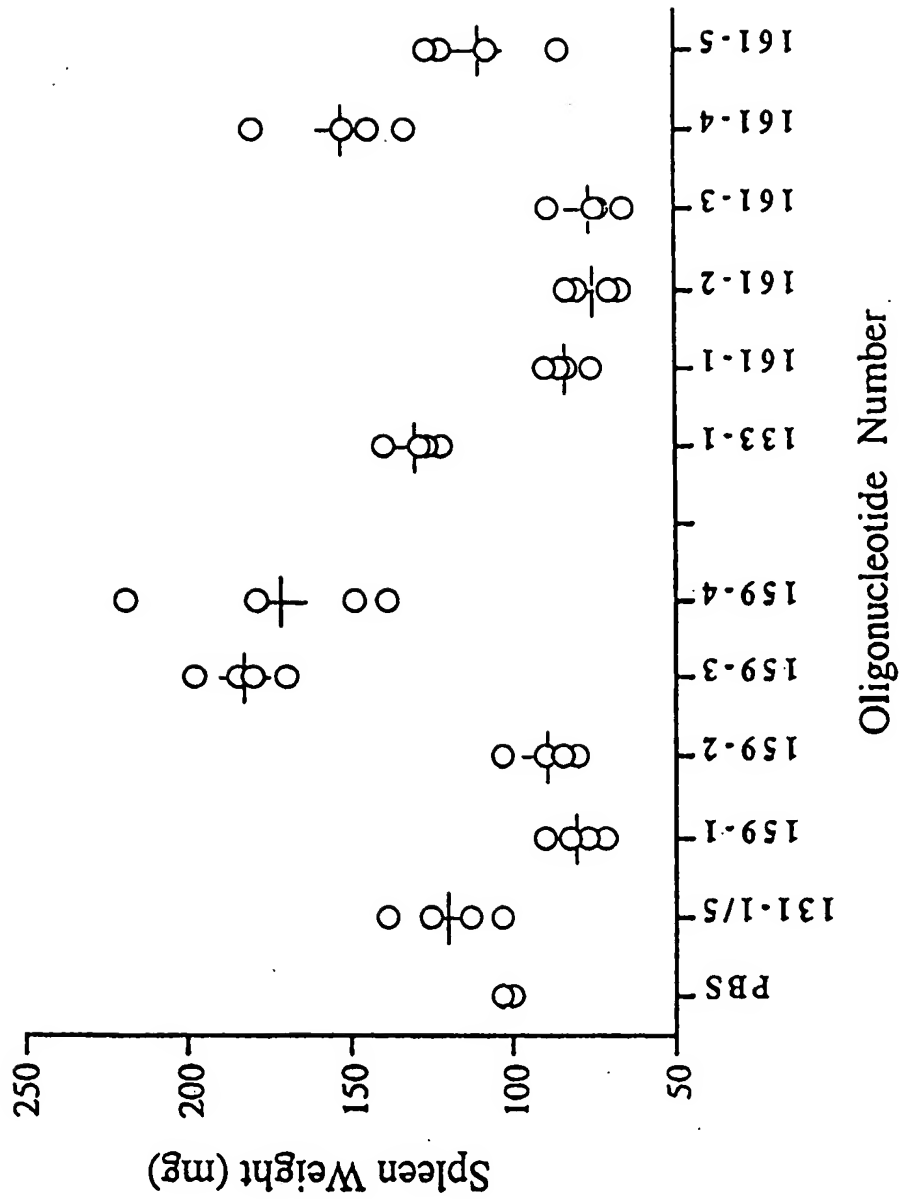
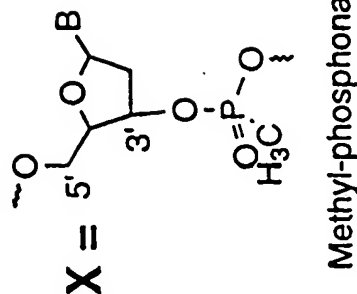


FIG. 12B

OLIGODEOXYNUCLEOTIDE PHOSPHOROTHIOATES AND MODIFICATION OF LINKAGES

<i>Oligo No.</i>		<i>Sequence & Modification</i>
<u>SEQ ID NO.: 1</u>	<u>131-1</u>	5'-CTATCTGACGTTCTCTGT-3'
<u>SEQ ID NO.: 57</u>	<u>167-1</u>	5'-CTATCTGXCGTTCTCTGT-3'
<u>SEQ ID NO.: 58</u>	<u>167-2</u>	5'-CTATCTXACGTTCTCTGT-3'
<u>SEQ ID NO.: 59</u>	<u>167-3</u>	5'-CTATCXGACGTTCTCTGT-3'
<u>SEQ ID NO.: 60</u>	<u>167-4</u>	5'-CTATXTGACGTTCTCTGT-3'
<u>SEQ ID NO.: 61</u>	<u>167-5</u>	5'-CTAXCTGACGTTCTCTGT-3'
<u>SEQ ID NO.: 62</u>	<u>167-6</u>	5'-CTXXCTGACGTTCTCTGT-3'
<u>SEQ ID NO.: 63</u>	<u>167-7</u>	5'-CTATCTGACGXTCTCTGT-3'
<u>SEQ ID NO.: 64</u>	<u>167-8</u>	5'-CTATCTGACGTXCCTCTGT-3'
<u>SEQ ID NO.: 65</u>	<u>167-9</u>	5'-CTATCTGACGTTXTCTGT-3'
<u>SEQ ID NO.: 66</u>	<u>167-10</u>	5'-CTATCTGACGTTXCCTGT-3'
<u>SEQ ID NO.: 67</u>	<u>16711</u>	5'-CTATCTGACGTTCTXTGT-3'
<u>SEQ ID NO.: 68</u>	<u>167-12</u>	5'-CTATCTGACGTTCTXXGT-3'



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FIG. 13A

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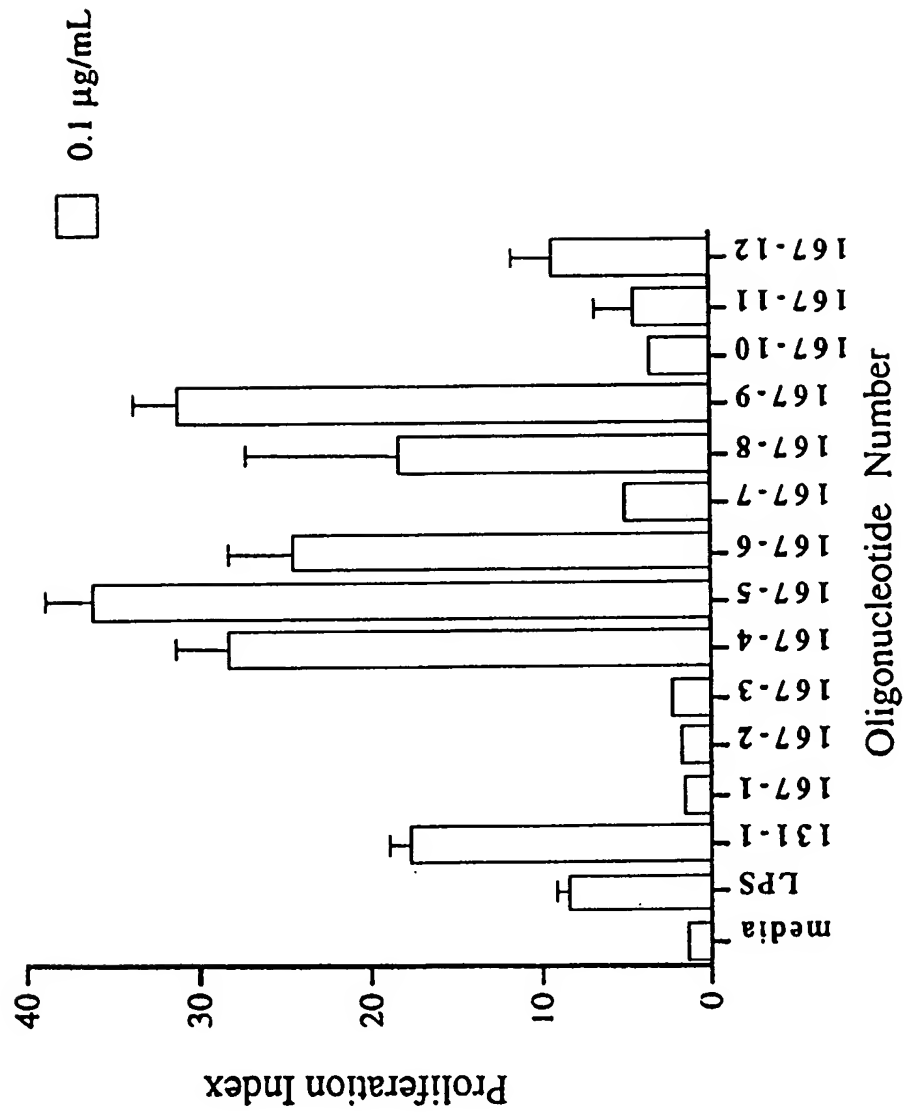
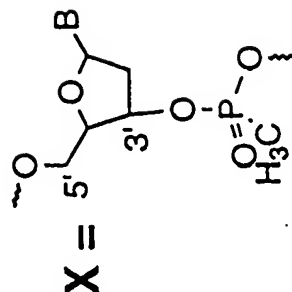


FIG. 13B

OLIGODEOXYNUCLEOTIDE PHOSPHOROTHIOATES AND MODIFICATION OF LINKAGES

<i>Oligo No.</i>	<i>Sequence & Modification</i>
<u>SEQ ID NO.: 1</u> 131-1	5'-CTATCTGACGTTCTCTGT-3'
<u>SEQ ID NO.: 57</u> 167-1	5'-CTATCTGXCGTTCTCTGT-3'
<u>SEQ ID NO.: 58</u> 167-2	5'-CTATCTXACGTTCTCTGT-3'
<u>SEQ ID NO.: 59</u> 167-3	5'-CTATCXGACGTTCTCTGT-3'
<u>SEQ ID NO.: 60</u> 167-4	5'-CTATXTGACGTTCTCTGT-3'
<u>SEQ ID NO.: 61</u> 167-5	5'-CTAXCTGACGTTCTCTGT-3'
<u>SEQ ID NO.: 62</u> 167-6	5'-CTXXCTGACGTTCTCTGT-3'
<u>SEQ ID NO.: 63</u> 167-7	5'-CTATCTGACGXTCTCTGT-3'
<u>SEQ ID NO.: 64</u> 167-8	5'-CTATCTGACGTXCCTCTGT-3'
<u>SEQ ID NO.: 65</u> 167-9	5'-CTATCTGACGTTXTCTGT-3'
<u>SEQ ID NO.: 66</u> 167-10	5'-CTATCTGACGTTXCCTGT-3'
<u>SEQ ID NO.: 67</u> 167-11	5'-CTATCTGACGTTCTXTGT-3'
<u>SEQ ID NO.: 68</u> 167-12	5'-CTATCTGACGTTCTXXGT-3'



Methyl-phosphonate

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FIG. 14A

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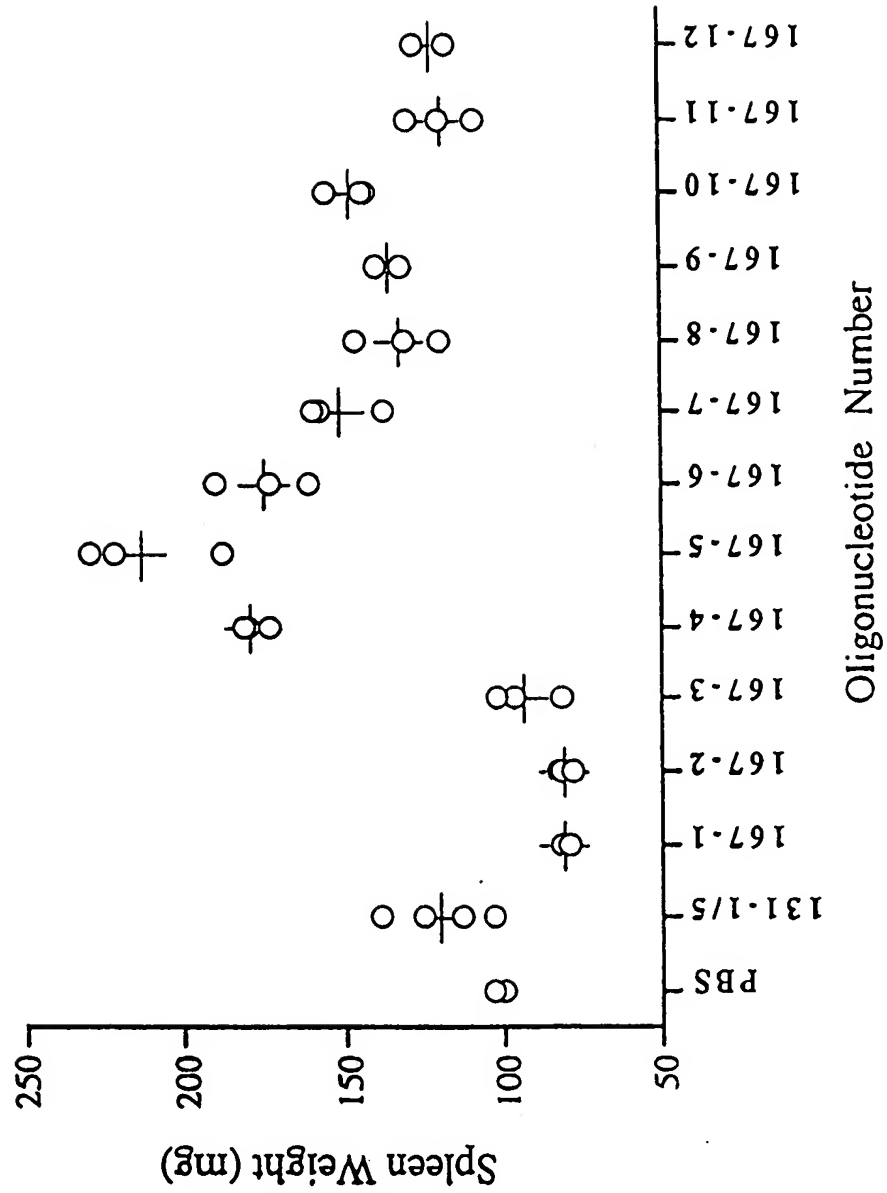
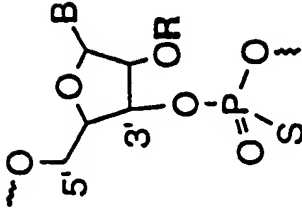


FIG. 14B

OLIGODEOXYNUCLEOTIDE PHOSPHOROTHIOATES AND MODIFICATION OF LINKAGES

Oligo No. Sequence & Modification

<u>SEQ ID NO.: 69</u>	<u>113-1</u>	5'-TCCATGACGTTCCCTGATGC-3'
<u>SEQ ID NO.: 70</u>	<u>23-1</u>	5'-TCCATGXCGTTCCCTGATGC-3'
<u>SEQ ID NO.: 71</u>	<u>23-3</u>	5'-TCCAXGACGTTCCCTGATGC-3'
<u>SEQ ID NO.: 72</u>	<u>29-2</u>	5'-TTYATGACGGTCCTGATGC-3'



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R_x = 2'-O-Methylribonucleoside
R_y = 2'-O-Methoxyethoxyribonucleoside

FIG. 15A

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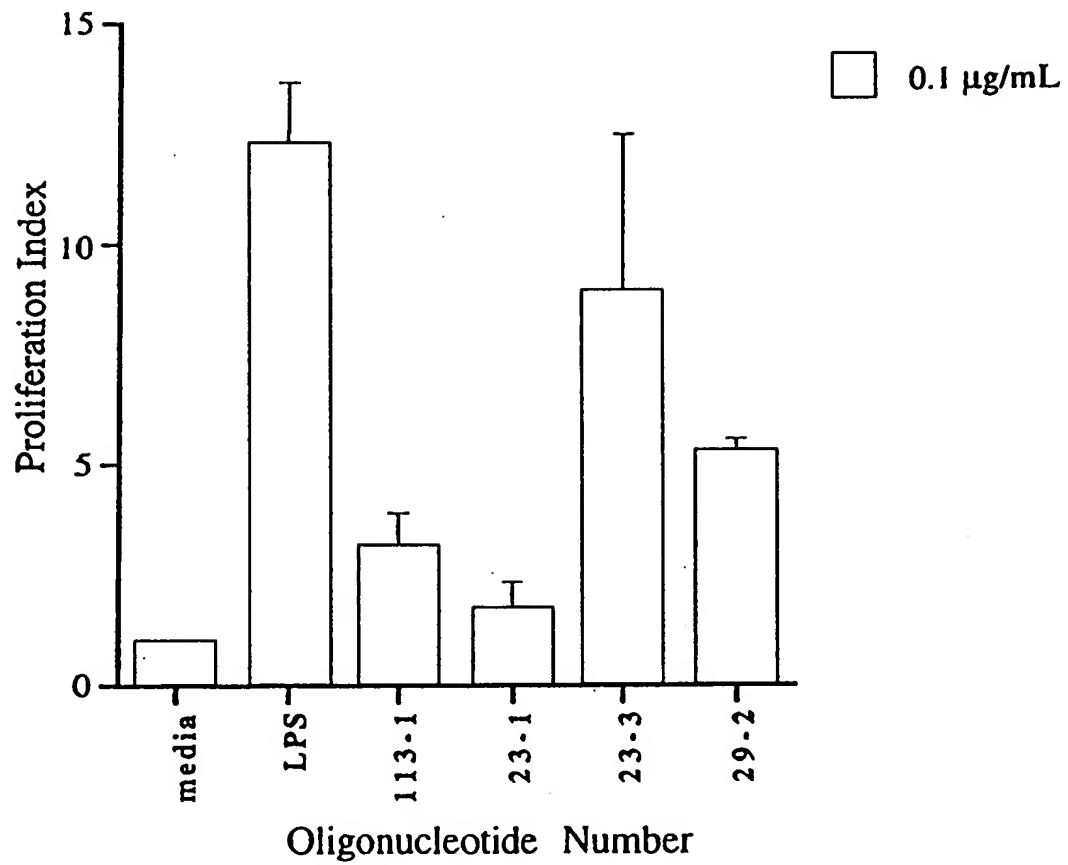
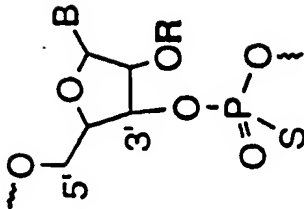


FIG. 15B

OLIGODEOXYNUCLEOTIDE PHOSPHOROTHIOATES AND MODIFICATION OF LINKAGES

Oligo No. Sequence & Modification

<u>SEQ ID NO.: 69</u>	<u>113-1</u>	5'-TCCATGACGTTCCCTGATGC-3'
<u>SEQ ID NO.: 70</u>	<u>23-1</u>	5'-TCCATGXCGTTCCCTGATGC-3'
<u>SEQ ID NO.: 71</u>	<u>23-3</u>	5'-TCCAXGACGTTCCCTGATGC-3'
<u>SEQ ID NO.: 72</u>	<u>29-2</u>	5'-TYATGACGGTCCCTGATGC-3'



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R_x = 2'-O-Methylribonucleoside
R_y = 2'-O-Methoxyethoxyribonucleoside

FIG. 16A

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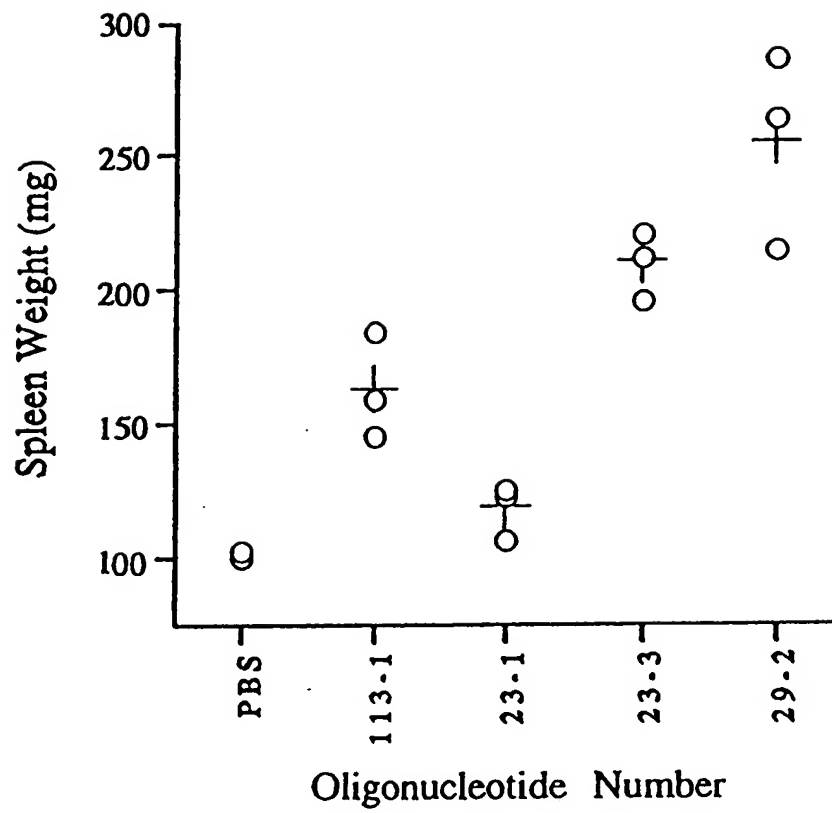


FIG. 16B

OLIGODEOXYNUCLEOTIDE PHOSPHOROTHIOATES AND MODIFICATION OF LINKAGES

Oligo No. *Sequence & Modification*

<u>SEQ ID NO.: 73</u>	<u>1</u>	5'-G A G A A C G C T C G A C C T T-3'
<u>SEQ ID NO.: 74</u>	<u>2</u>	5'-G A G A A C G C T C G A C C T T-3'——5'-G A G A A C G C T C G A C C T T-3'
<u>SEQ ID NO.: 75</u>	<u>3</u>	3'-T T C C A G C T C G C A A G A G-5'——5'-G A G A A C G C T C G A C C T T-3'
<u>SEQ ID NO.: 76</u>	<u>4</u>	5'-G A G A A C G C T C G A C C T T-3'——3'-T T C C A G C T C G C A A G A G-5'
<u>SEQ ID NO.: 77</u>	<u>5</u>	5'-T C T C C C A G C G T G C G C C A T-3'
<u>SEQ ID NO.: 78</u>	<u>6</u>	5'-T C C C A G C G T G C G C C A T-3'——5'-T C C C A G C G T G C G C C A T-3'
<u>SEQ ID NO.: 79</u>	<u>7</u>	3'-T A C C G C G T G C G A C C C T-5'——5'-T C C C A G C G T G C G C C A T-3'
<u>SEQ ID NO.: 80</u>	<u>8</u>	5'-T C C C A G C G T G C G C C A T-3'——3'-T A C C G C G T G C G A C C C T-5'

FIG. 17A

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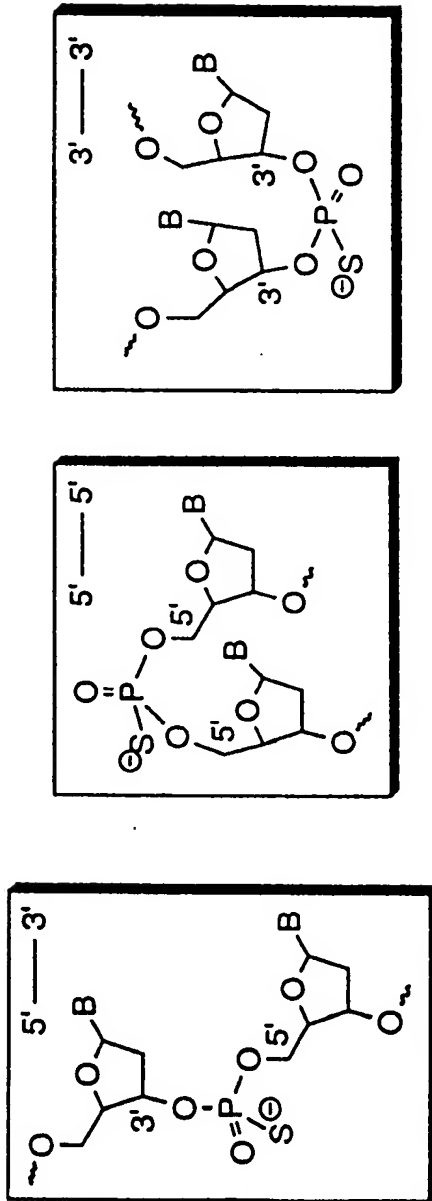


FIG. 17B

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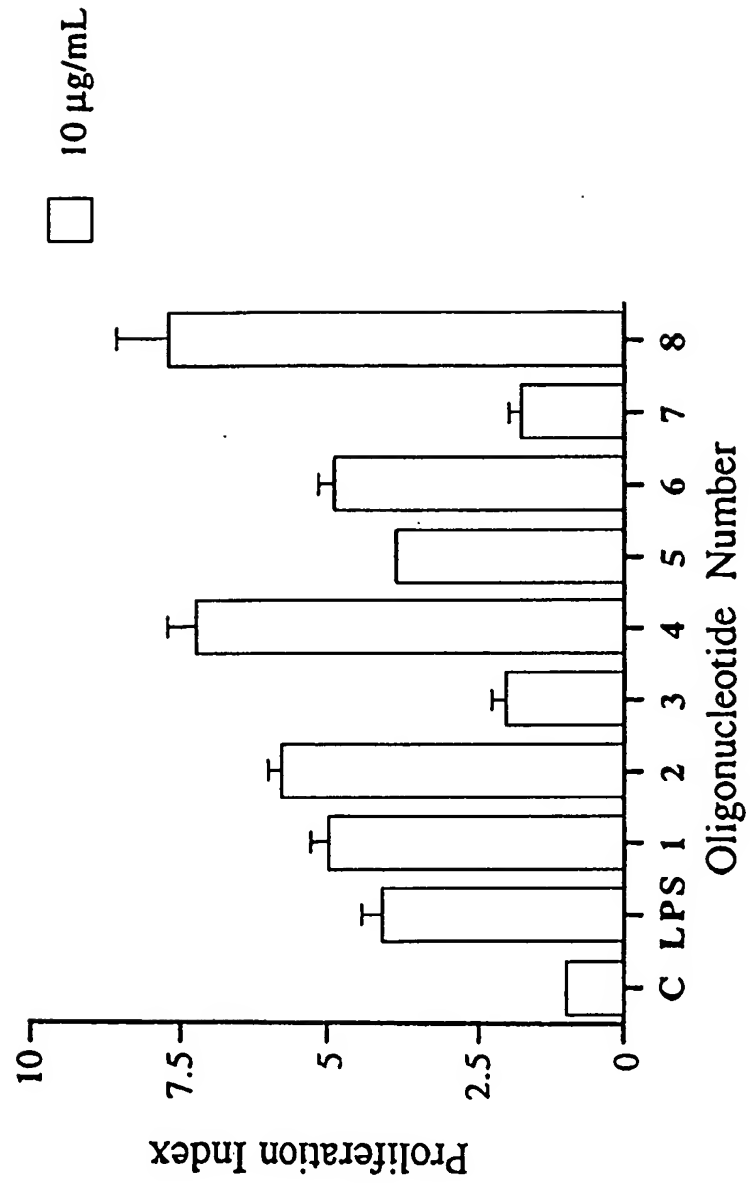


FIG. 17C

OLIGODEOXYNUCLEOTIDE PHOSPHOROTHIOATES AND MODIFICATION OF LINKAGES

Oligo No.		Sequence & Modification
<u>SEQ ID NO.: 1</u>	131-1	5'-CTATCTGACGTTCTCTGT-3'
<u>SEQ ID NO.: 81</u>	175-1	5'-CTATXGTGACGTTCTCTGT-3'
<u>SEQ ID NO.: 82</u>	175-2	5'-CTATCTGACGTTXCXCTGT-3'
<u>SEQ ID NO.: 83</u>	175-3	5'-CTAXXTGACGTTCTCTGT-3'
<u>SEQ ID NO.: 84</u>	175-4	5'-CTATCTGACGTTXCXXTGT-3'
<u>SEQ ID NO.: 85</u>	175-5	5'-CTATCTGAXXTTCTCTGT-3'
<u>SEQ ID NO.: 86</u>	175-6	5'-CTATCTXACGTTCTCTGT-3'
<u>SEQ ID NO.: 87</u>	175-7	5'-CTATCTGACGTXCCTCTGT-3'
<u>SEQ ID NO.: 88</u>	175-9	5'-CTATCTGACGTTCTCTGT-3' (all-β-L-DNA/PS)

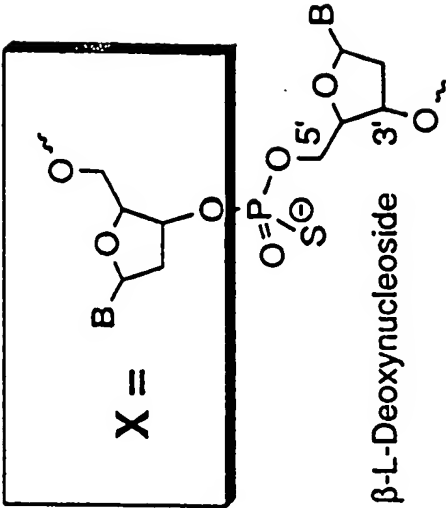


FIG. 18A

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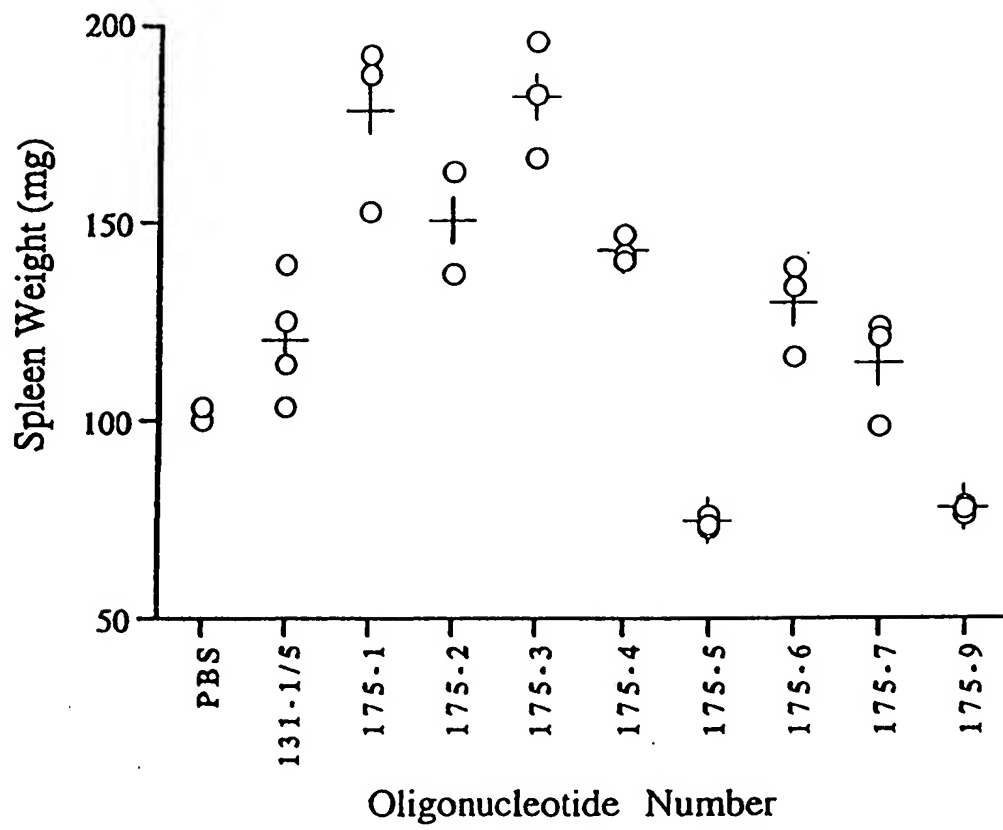


FIG. 18B

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FIG. 19A

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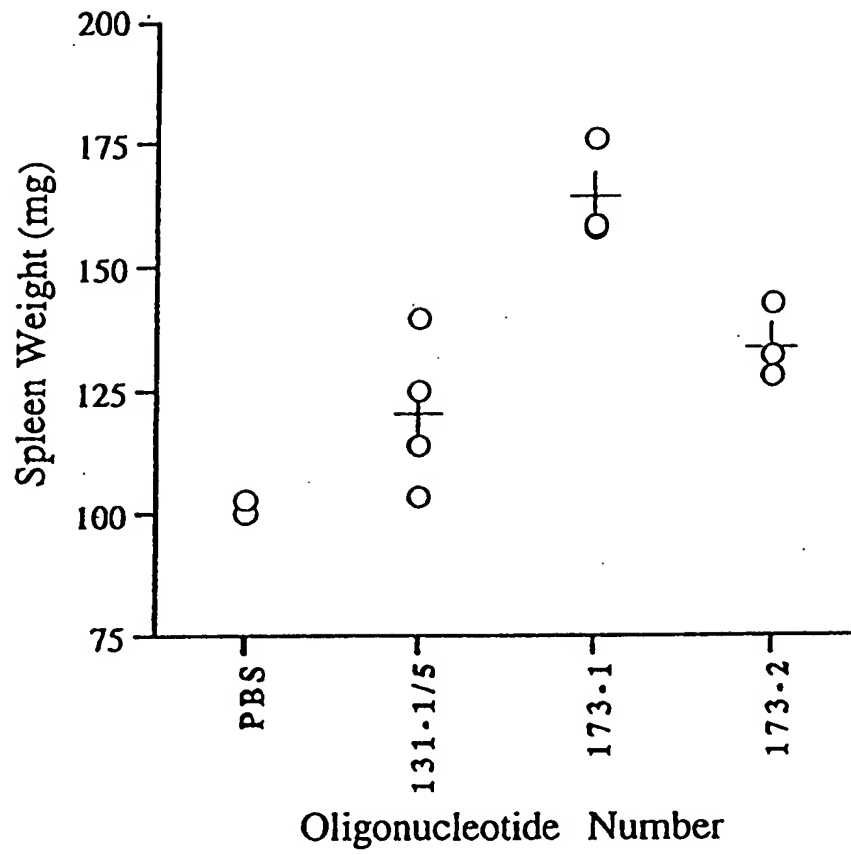


FIG. 19B

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OLIGODEOXYNUCLEOTIDE PHOSPHOROTHIOATES AND MODIFICATION OF LINKAGES

<u>SEQ ID NO.:</u>	<u>Oligo No.</u>	<u>Sequence & Modification</u>
<u>SEQ ID NO.: 8</u>	133-1	5'-CCTACTAGCGTTCTCATC-3'
<u>SEQ ID NO.: 91</u>	143-1	5'-CCTXXTAGCGTTCTCATC-3'
<u>SEQ ID NO.: 92</u>	143-2	5'-CCTYTAGCGTTCTCATC-3'
<u>SEQ ID NO.: 93</u>	143-3	5'-CCTZZTAGCGTTCTCATC-3'
<u>SEQ ID NO.: 94</u>	143-4	5'-CCTXXTAGCGTVCTCATC-3'
<u>SEQ ID NO.: 95</u>	143-5	5'-CCTACTAGGCTTCTCATC-3'

X = 1',2'-Dideoxyribose
Y = C3-Linker
Z = 3'-OMe
V = 2'-OMe

FIG. 20A

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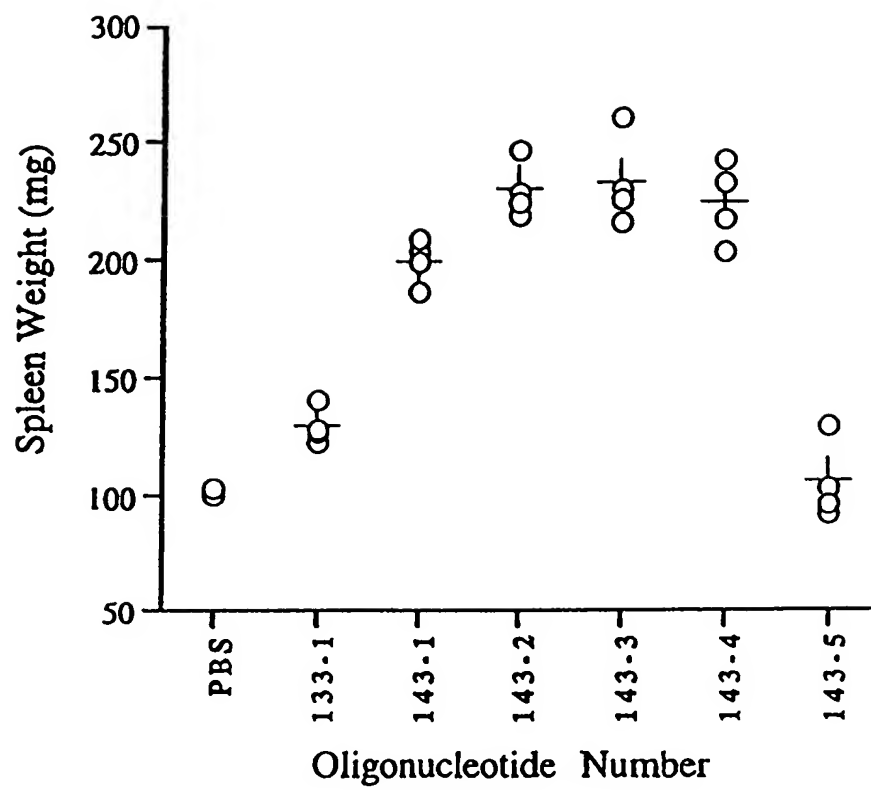


FIG. 20B

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OLIGODEOXYNUCLEOTIDE PHOSPHOROTHIOATES AND
MODIFICATION OF LINKAGES

Oligo No.	Sequence & Modification
SEQ ID NO.: 1	1 5'-CTATCTGACGTTCTCTGT-3' (131-1)
SEQ ID NO.: 96	2 5'-CTATCTGACG*TTCTCTGT-3' (E 633L)
SEQ ID NO.: 97	3 5'-CTATCTGAG*CTTCTCTGT-3' (E 636)
SEQ ID NO.: 98	4 5'-TCTCCCAGCGTGC GCCAT-3'
SEQ ID NO.: 99	5 5'-TCTCCCAGCG*TGCG*CCAT-3' (E 603)
SEQ ID NO.: 100	6 5'-CTATXTGACG*TTCTCTGT-3' (E 639L)

FIG. 21A

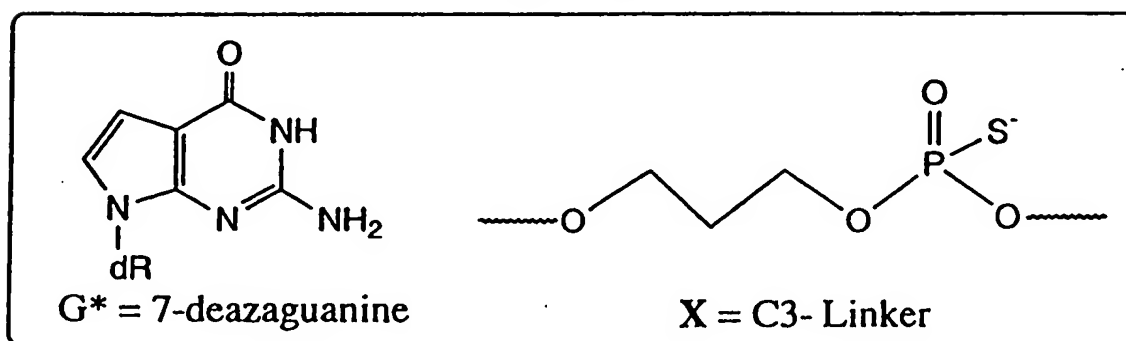


FIG. 21B

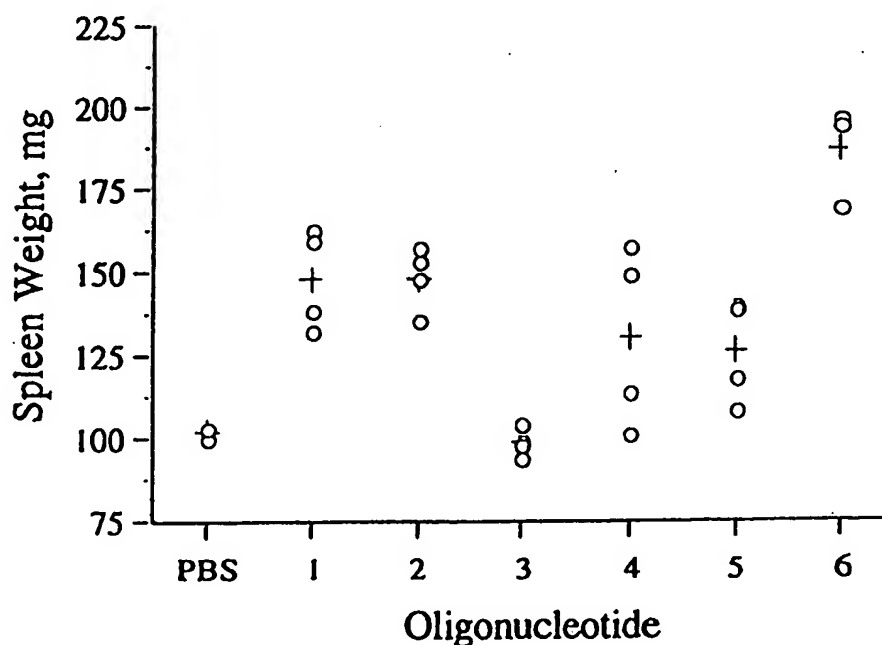
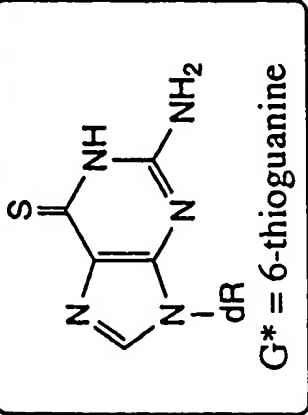


FIG. 21C

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OLIGODEOXYNUCLEOTIDE PHOSPHOROTHIOATES AND SITE OF MODIFICATION

<i>Oligo No.</i>	<i>Sequence & Modification</i>
<u>SEQ ID NO.: 1</u>	5'-CTATCTGAC <u>G</u> TTCTCTGT-3' (131-1)
<u>SEQ ID NO.: 101</u>	5'-CTATCTGAC <u>G</u> *TTCTCTGT-3' (E 682)
<u>SEQ ID NO.: 102</u>	5'-CTATCTGAG* <u>C</u> TTCTCTGT-3' (E 683)



G* = 6-thioguanine

FIG. 22A

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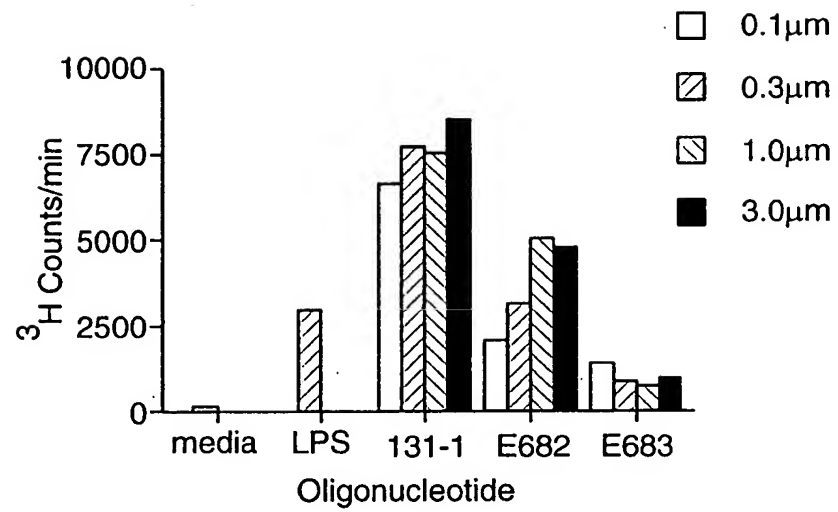


FIG. 22B

OLIGODEOXYNUCLEOTIDE PHOSPHOROTHIOATES AND SITE OF MODIFICATION

Oligo No. Sequence & Modification

<u>SEQ ID NO.: 1</u>	1	5'-CTATCTGAC <u>G</u> TTCTCTGT-3'
<u>SEQ ID NO.: 2</u>	2	5'-CTATCTGAC* <u>G</u> TTCTCTGT-3'
<u>SEQ ID NO.: 3</u>	3	5'-CTATCTGAC <u>C</u> *TTCTCTGT-3'
<u>SEQ ID NO.: 4</u>	4	5'-CTATCTGAC** <u>G</u> TTCTCTGT-3'
<u>SEQ ID NO.: 5</u>	5	5'-CTATCTGAC <u>C</u> **TTCTCTGT-3'

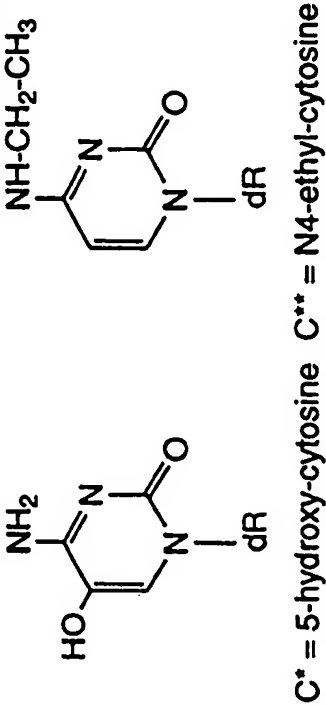


FIG. 23A

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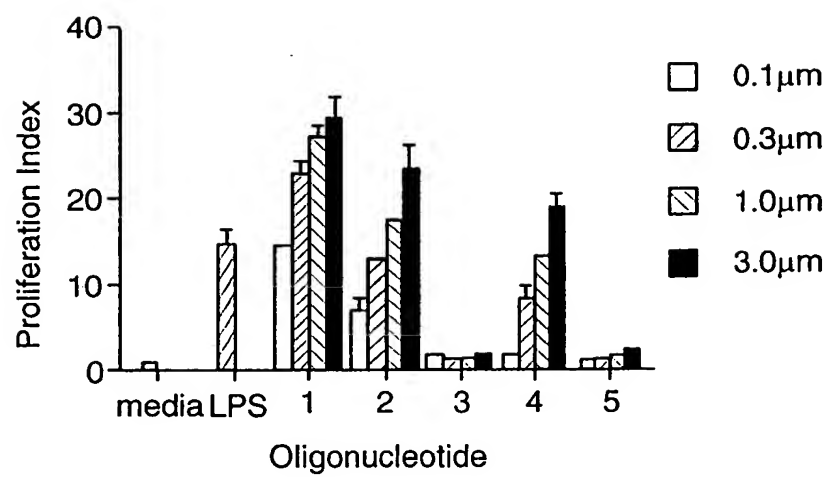


FIG. 23B

OLIGODEOXYNUCLEOTIDE PHOSPHOROTHIOATES AND SITE OF MODIFICATION

Oligo No. Sequence & Modification

<u>SEQ ID NO.: 1</u>	1	5'-CTATCTGAC <u>CGTTCTCTGT</u> -3'
<u>SEQ ID NO.: 2</u>	2	5'-CTATCTGAC* <u>GTTCTCTGT</u> -3'
<u>SEQ ID NO.: 3</u>	3	5'-CTATCTGAC <u>CC*TTCTCTGT</u> -3'
<u>SEQ ID NO.: 4</u>	4	5'-CTATCTGAC* <u>GTTCTCTGT</u> -3'
<u>SEQ ID NO.: 5</u>	5	5'-CTATCTGAC <u>CC*TTCTCTGT</u> -3'

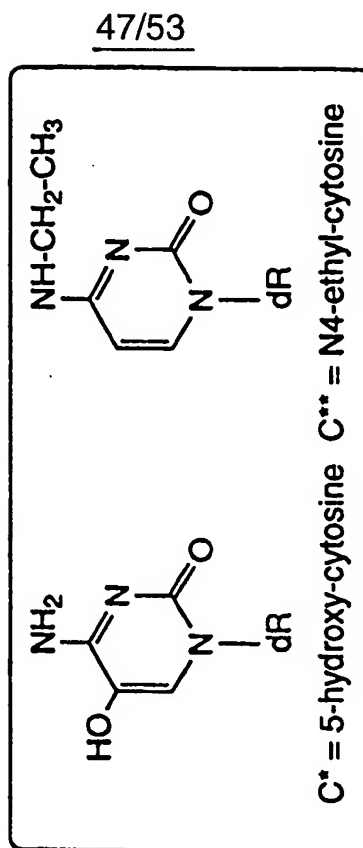


FIG. 24A

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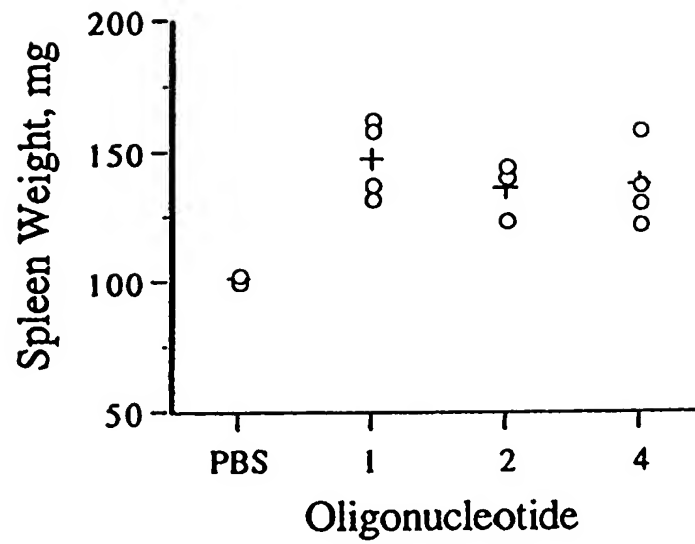


FIG. 24B

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OLIGODEOXYNUCLEOTIDE PHOSPHOROTHIOATES AND SITE OF MODIFICATION

<i>Oligo No.</i>	<i>Sequence & Modification</i>
<u>SEQ ID NO.: 1</u>	1 5'-CTATCTGAC <u>G</u> TTCTCTGT-3'
<u>SEQ ID NO.: 111</u>	2 5'-CTATCTGAC* <u>G</u> TTCTCTGT-3'
<u>SEQ ID NO.: 112</u>	3 5'-CTATCTGAC <u>C</u> *TTCTCTGT-3'

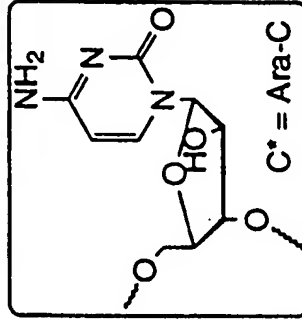


FIG. 25A

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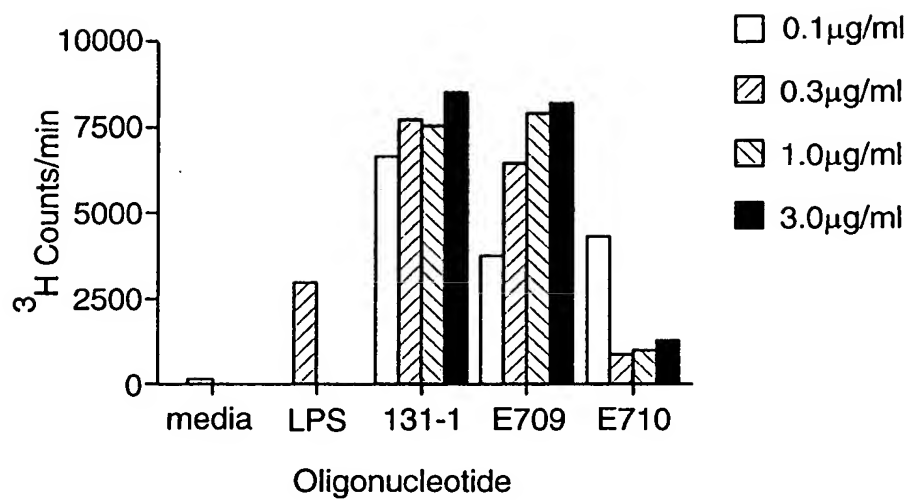


FIG. 25B

OLIGODEOXYNUCLEOTIDE PHOSPHOROTHIOATES AND SITE OF MODIFICATION

Oligo No. Sequence & Modification

<u>SEQ ID NO.:</u>	<u>1</u>	5'-CTATCTGAC <u>CGTTCTCTGT</u> -3' (131-1)
<u>SEQ ID NO.:</u>	<u>103</u>	5'-CTATCTGAC* <u>GTTCTCTGT</u> -3' (E 647)
<u>SEQ ID NO.:</u>	<u>104</u>	5'-CTATXTGAC* <u>GTTCTCTGT</u> -3' (E 653)

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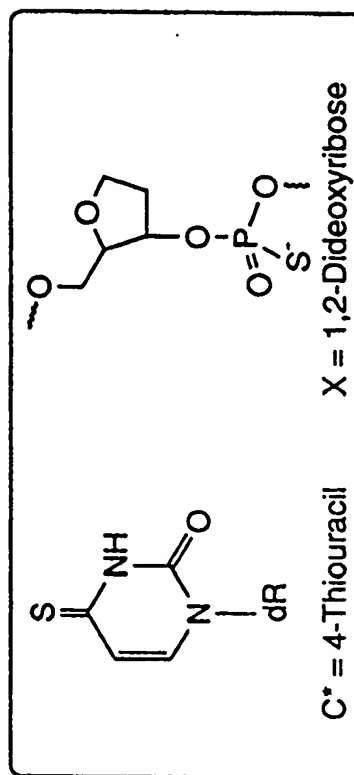


FIG. 26A

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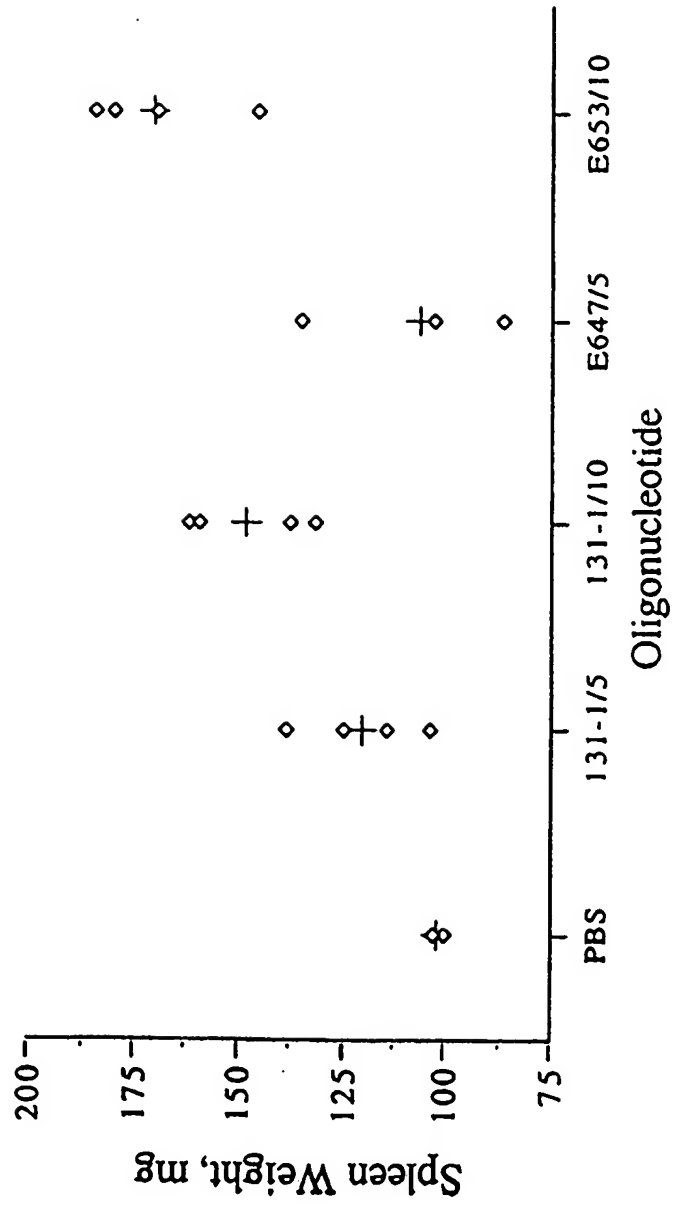


FIG. 26B

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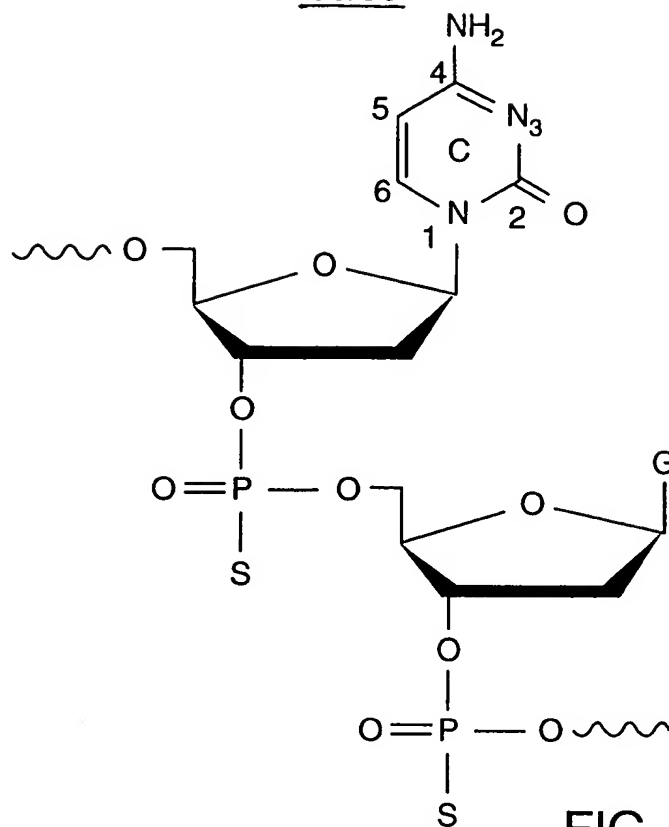


FIG. 27

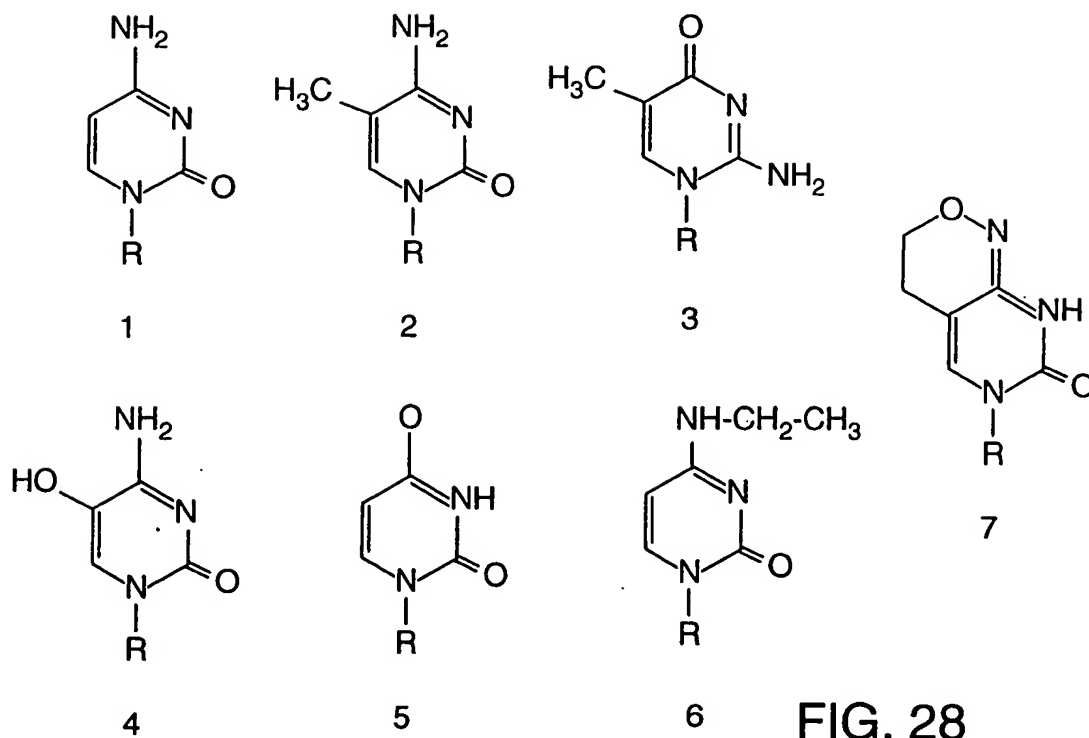


FIG. 28